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**SELECTED RUNOFF EVENTS
FOR
SMALL AGRICULTURAL WATERSHEDS
IN THE
UNITED STATES**

/

UNITED STATES DEPARTMENT OF AGRICULTURE
✓✓✓ ✓
Agricultural Research Service
Soil and Water Conservation Research Division
Washington 25, D.C.

**In Cooperation with the
STATE AGRICULTURAL EXPERIMENT STATIONS**

January 1960

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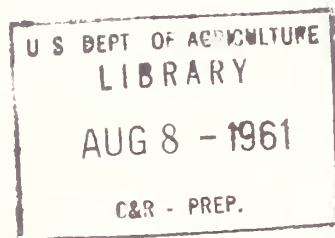


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FOREWORD

This document presents basic data relating to runoff from small agricultural watersheds in the United States. It is a continuation of the activity of processing and releasing hydrologic data gathered cooperatively with the State Agricultural Experiment Stations and other agencies. The material has been prepared by the Watershed Technology Research Branch of the Soil and Water Conservation Research Division as a means of furnishing basic information on selected storm runoff events, with associated data on rainfall, land use, and antecedent conditions, to the Soil Conservation Service, other governmental agencies and private engineers.

Descriptions of the watersheds for which data are given herein are presented in the prior document, "Monthly Precipitation and Runoff for Small Agricultural Watersheds in the United States". Other information on the same watersheds is given in "Annual Maximum Flows from Small Watersheds in the United States".

Cecil H. Wadleigh, Director
Soil and Water Conservation
Research Division

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WATERSHED DATA

The decimal system of paging is used to index the watershed data. Pages are numbered according to location and watershed number. For example, page 5.1 is location 5 (College Park, Maryland), Watershed 1 (W-1 at College Park). This is the same numbering and paging system used in the two prior documents. Only the location number is given in the following tabulation:

<u>Location</u>	
Cohocton, New York	2
Freehold, New Jersey	4
College Park, Maryland	5
Hagerstown, Maryland	6
Vero Beach, Florida	8
Americus, Georgia	9
High Point, North Carolina	11
Blacksburg, Virginia	13
Chatham, Virginia	14
Staunton, Virginia	15
Edwardsville, Illinois	17
Lafayette, Indiana	19
Iowa City, Iowa	21
Bethany, Missouri	24
Coshocton, Ohio	26
Hamilton, Ohio	27
Colby, Wisconsin	29
Fennimore, Wisconsin	31
Bentonville, Arkansas	33
Cherokee, Oklahoma	34
Guthrie, Oklahoma	35
Stillwater, Oklahoma	37
Tyler, Texas	40
Vega, Texas	41
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INTRODUCTION

This volume presents basic information relating to selected storm events for several of the experimental agricultural watersheds in the United States. Storm runoff data are given for 67 of the 366 watersheds for which other information has previously been distributed. Some of the 67 watersheds are those for which records have been discontinued. Others are from watersheds currently in operation. It is not contemplated that selected storm data for the remaining discontinued watersheds will be issued as was done for "Annual Precipitation and Runoff for Small Agricultural Watersheds in the United States", and "Annual Maximum Flows from Small Agricultural Watersheds in the United States". Consideration is being given, however, to annual distribution of information similar to that given herein and in the two other documents for all experimental watersheds currently under study by the Agricultural Research Service.

Cooperation and Acknowledgments

The establishment and operation of the experimental watershed projects for which information is presented have been the joint responsibility of various Federal, State, and local agencies. The Federal agencies include the Bureau of Agricultural Engineering, the Soil Conservation Service, the Bureau of Plant Industry, and the Agricultural Research Service of the Department of Agriculture and the U. S. Geological Survey of the Department of Interior. Throughout the life of the projects the State Agricultural Experiment Stations of the States within which the watersheds are located have cooperated in the planning and operation of the research projects. In several cases, local agencies such as drainage and conservancy districts have also cooperated in the work. At each project many individuals have contributed to the planning and establishment of the watersheds and the collection, compilation, and analysis of the data. A listing of many of those who made substantial contributions is given in the volume on "Monthly Precipitation and Runoff for Small Agricultural Watersheds".

Information from a new location has been included in this volume and the following should be added to the list of contributors mentioned above:

62. Oxford, Mississippi - Russell Woodburn,
B. R. Colby, John W. Curran, H. B. Osborn.

Explanation

Descriptions of the watersheds for which information is presented here are given in the volume on "Monthly Precipitation and Runoff for Small Agricultural Watersheds in the United States". The page numbering system of this volume is identical with that of the prior volume, that is, each watershed has the same basic page numbers.

The watersheds for which data are presented were selected to give reasonable representation to watershed size and geographic area. The map of "Problem Areas in Soil Conservation" compiled by the Soil Conservation Service was used also to guide the selection.

From the file of data, two to four storm runoff events for each watershed were selected for presentation. In general, the selected runoff events are those in which runoff was produced by a relatively uniform rainfall excess of short duration.

The information for each storm runoff event includes tabulations of:

1. Antecedent daily rainfall and runoff for 30 days before the event
2. Rainfall intensities and accumulated amounts for the event
3. Runoff rates and accumulated amounts for the event
4. Watershed conditions at the time of the event.

Simple graphs of rates of rainfall and runoff are presented for each event and a map of each watershed is included. For some storms an isohyetal map is also presented.

Though there are some minor variations in the manner of presentation, it is believed that symbols and conventions used in the presentation of data are familiar to all hydrologists.

Cohocton, New York			Watershed W-II (2.2)			13.8 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
<u>Event of June 7, 1938</u>								
5-9-38	.34	0	6-7-38	Raingage	R-1	6-7-38		
5-10	.02	0	12:55p	0	0	1:00p	0	0
5-11	.14	0	:58	4.80	.24	:00 $\frac{1}{2}$.346	.0017
5-14	.31	0	:59	9.60	.40	:01	.158	.0038
5-15	.40	0	1:00	7.20	.52	:01 $\frac{1}{2}$.049	.0047
5-20	.35	0	:01	4.80	.60	:02	.031	.0050
5-23	.12	0	:05	2.55	.77	:04	.025	.0059
5-24	.53	0	:10	.36	.80	:06	.023	.0067
6-2	.52 $\frac{1}{2}$	0	ceased			:08	.013	.0073
6-7	.12 $\frac{1}{2}$	0	:33	0	.80	:10	.005	.0076
<u>Watershed Conditions:</u> Hay 6 inches high sparse stand 80%; potatoes on contour 3 inches high with 5-inch ridges 11%; oats 8 inches high 3%; hay strip above and 900-foot diversion terrace channel plowed, ready for seeding to alfalfa 6%.			:40	.09	.81	:13	.004	.0078
			2:00	.06	.83	:16	.003	.0080
			:11	.05	.84	:19	.001	.0081
			ceased			:36e	0	.0082
			:50	0	.84			
			3:00e	.06	.85			
<u>Event of September 12-13, 1938</u>								
8-17-38	.15	0	9-12-38	Raingage	R-1	9-12-38		
8-21	.07	0	10:10p	0	0	10:37p	0	0
8-23	.32	0	:13	1.00	.05	:38	.046	.0007
9-3	.18	0	:18	.48	.09	:38 $\frac{1}{2}$.062	.0011
9-7	.82	0	:28	1.32	.31	:39	.031	.0015
<u>Watershed Conditions:</u> Hay mowed July and August, now 4 inches high, sparse to medium stand 80%; potatoes on contour 8 inches high on 4-inch ridges 11%; oats 24 inches high medium stand 3%; medium stand of alfalfa on diversion channel and filter strip above 6 inches high 6%.			:33	3.12	.57	:40	.040	.0021
			:38	3.48	.86	:41	.037	.0027
			:42	.75	.91	:42	.029	.0033
			:45	1.80	1.00	:43	.021	.0037
			:53	.98	1.13	:45	.021	.0044
			:57	1.35	1.22	:47	.015	.0050
			11:02	3.48	1.51	:49	.012	.0055
			:06	3.75	1.76	:51	.011	.0059
			:12	3.00	2.06	:53	.009	.0062
			:15	3.00	2.21	:55	.009	.0065
			:21	1.40	2.35	:57	.011	.0068
			:33	.55	2.46	11:00	.011	.0073
9-13-38 12:07a			:43	.18	2.49	:02	.018	.0078
			:55	.35	2.56	:04	.030	.0086
			12 Mt	1.08	2.65	:06	.044	.0098
			:22	.40	2.96	:10	.052	.0133
			:33	1.15	3.17	:13	.049	.0158
			:44	1.64	3.47	:15	.049	.0174
			:53	1.73	3.73	:17	.042	.0189
			1:03	.78	3.86	:23	.031	.0225
			:14	.33	3.92	:29	.025	.0253
			:23	.13	3.94	:35	.025	.0278
			ceased			:47	.021	.0324
Notes: 1/ Prior to 2:30a. To convert runoff in in/hr to cfs multiply by 13.91.								

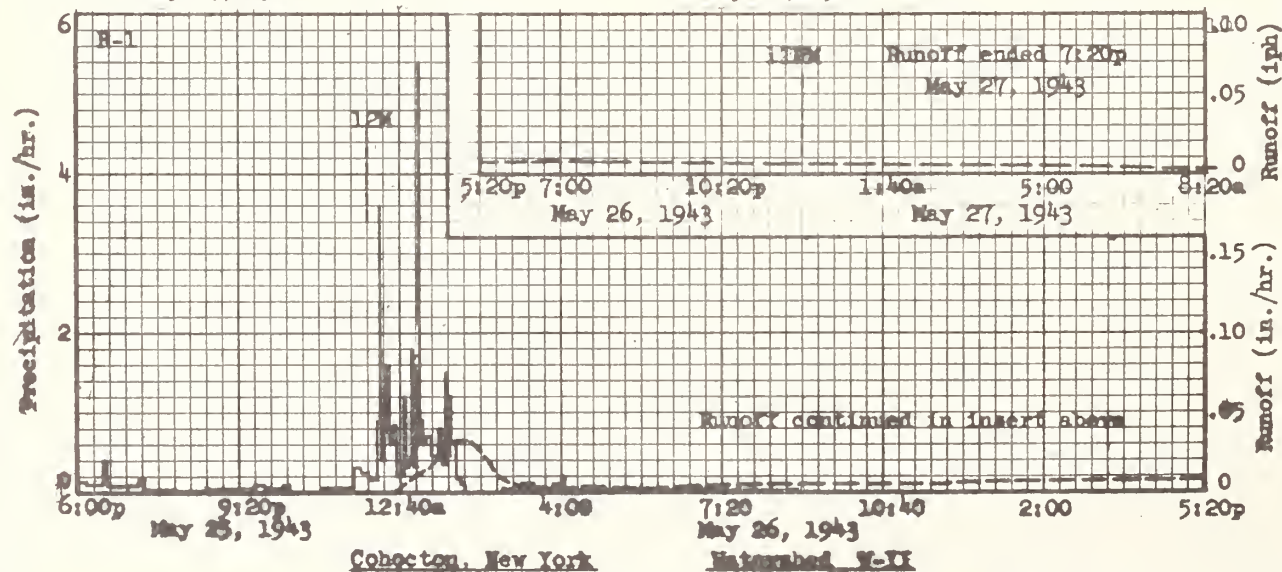
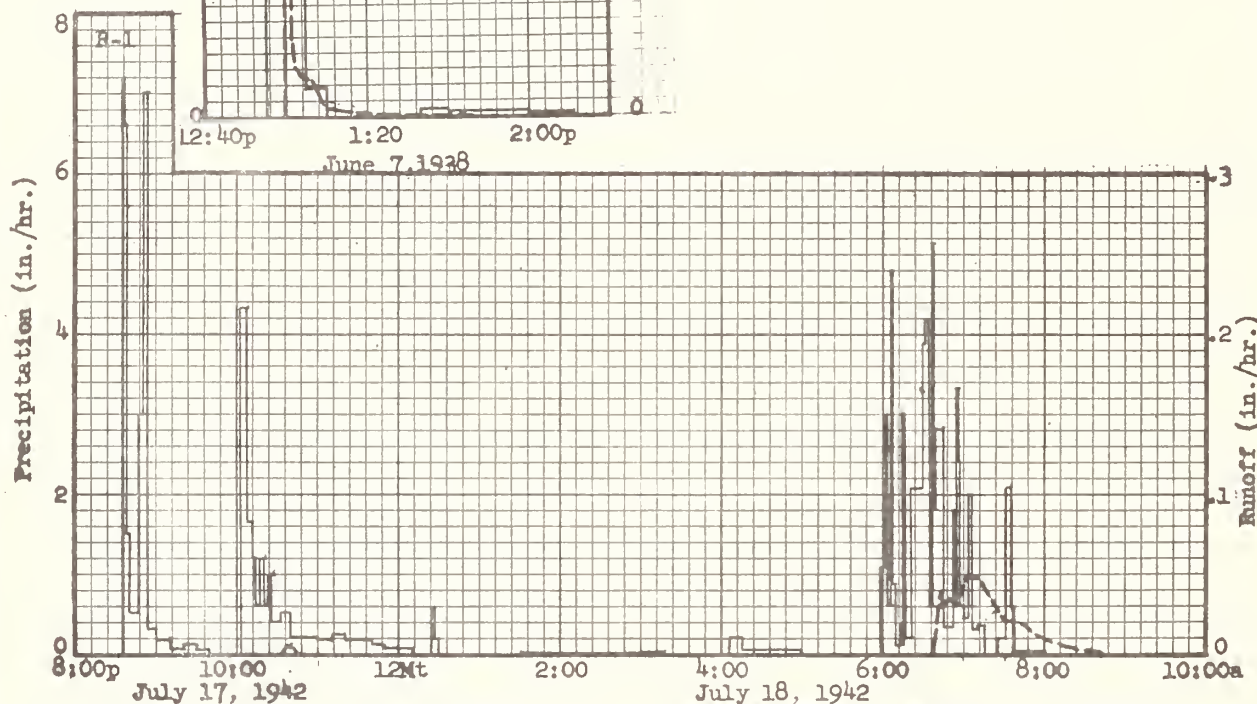
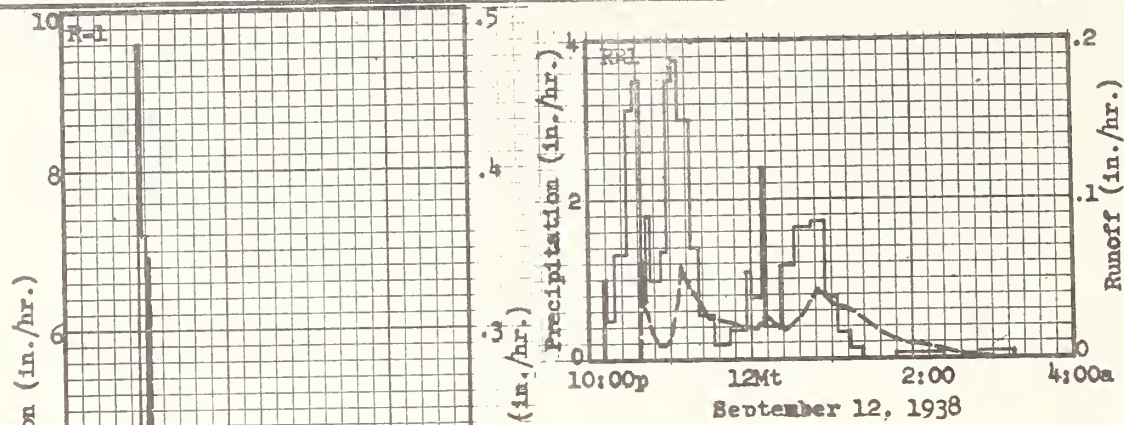
Cohocton, New York			Watershed W-II (2.2)			13.8 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of September 12-13, 1938 Cont'd.								
			1:47a	0	3.94	11:59p	.019	.0365
			2:23	.05	3.97	9-13-38		
			ceased			12:05a	.019	.0384
			:50	0	3.97	:11	.025	.0406
			3:15e	.07	4.00	:14	.025	.0418
						:20	.019	.0440
						:26	.018	.0459
						:38	.028	.0505
						:50	.042	.0575
						:53	.041	.0596
						:55	.041	.0610
						1:01	.034	.0648
						:07	.033	.0682
						:13	.030	.0713
						:33	.017	.0792
						:53	.010	.0837
						2:13	.006	.0863
						:33	.002	.0876
						3:00e	0	.0880
Event of July 17-18, 1942								
6-19-42.	.02	0	7-17-42	Raingage	R-1	7-17-42		
6-21	.24	0	8:35p	0	0	10:29p	0	0
6-23	.04	0	:37	7.20	.24	:31	.001	.0001
6-24	.08	0	:38	6.60	.35	:33	.002	.0002
6-30	1.47	0	:40	1.50	.40	:34	.003	.0002
7-4	.05	0	:46	.50	.45	:35	.004	.0003
7-6	.25	0	:51	3.00	.70	:36	.005	.0003
7-8	.08	0	:54	7.00	1.05	:37	.004	.0004
7-10	1.52	0	9:00	.30	1.08	:38	.002	.0005
7-11	.09	0	:10	.18	1.11	:47e	0	.0006
7-17	.07 ^{1/}	0	:20	.06	1.12	7-18-42		
			:30	.12	1.14	6:37a	0	0
			:40	.06	1.15	:38	.010	.0004
			ceased			:39	.017	.0006
			10:03	0	1.15	:40	.020	.0009
			:08	4.32	1.51	:41	.022	.0012
			:12	1.65	1.62	:42	.033	.0017
			:14	1.20	1.66	:43	.041	.0023
			:17	.60	1.69	:44	.032	.0029
			:20	1.20	1.75	:45	.029	.0034
			:23	.60	1.78	:47	.031	.0044
			:26	1.00	1.83	:49	.035	.0055
			:32	.40	1.87	:52	.032	.0072
			:40	.52	1.94	:55	.036	.0089
			11:00	.21	2.01	:58	.042	.0109
			:10	.18	2.04	7:00	.047	.0124
			:20	.24	2.08	:03	.050	.0148
			:40	.18	2.14	:08	.049	.0189
			:50	.12	2.16	:11	.049	.0214
			12 Mt	.06	2.17	:14	.042	.0237
Watershed Conditions: Most of area was in sparse to medium stand of hay 18 to 24 inches high 94%; diversion channel and filter strip above in medium stand of alfalfa 24 inches high 6%.								
Notes: ^{1/} Prior to 11:15a. To convert runoff in in/hr to cfs multiply by 13.91.								

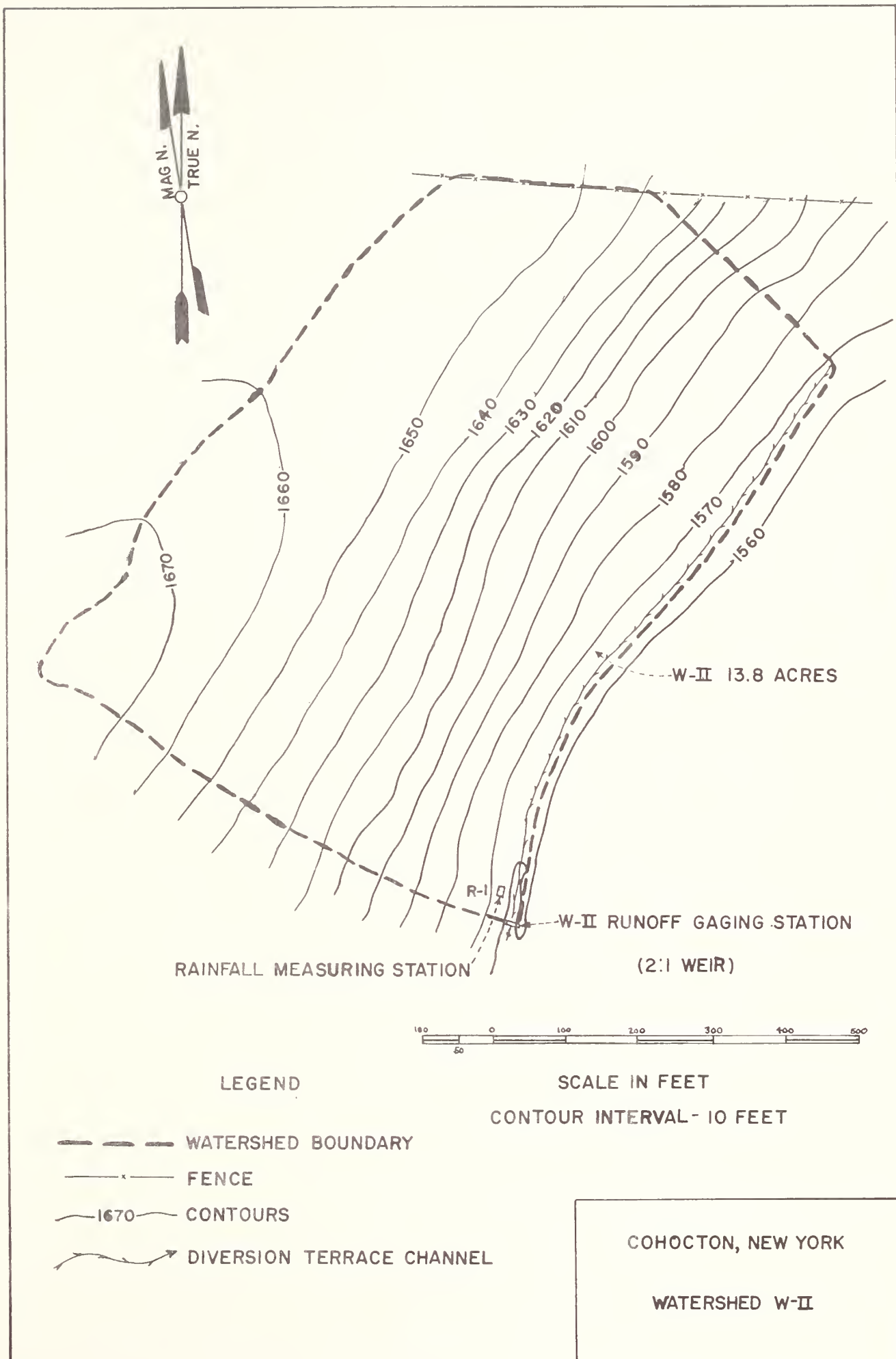
Cohocton, New York			Watershed W-II (2.2)			13.8 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 17-18, 1942 Cont'd.								
			7-18-42			7:17a	.036	.0257
			12:10a	.06	2.18	:20	.032	.0274
			ceased			:26	.026	.0303
			:24	0	2.18	:32	.020	.0326
			:27	.60	2.21	:38	.020	.0346
			:30	.20	2.22	:44	.018	.0365
			ceased			:50	.014	.0381
			1:30	0	2.22	:56	.010	.0393
			3:00	.02	2.25	8:02	.009	.0403
			:18	.03	2.26	:14	.005	.0417
			ceased					
			4:05	0	2.26	:20	.004	.0421
			:16	.22	2.30	:26	.002	.0424
			5:00	.04	2.33	:32	.002	.0426
			ceased			:41e	0	.0427
			:57	0	2.33			
			6:02	1.08	2.42			
			:03	3.00	2.47			
			:05	.60	2.49			
			:06	4.80	2.57			
			:08	.90	2.60			
			:14	.10	2.61			
			:17	.40	2.63			
			:18	3.00	2.68			
			:21	.20	2.69			
			:30	2.07	3.00			
			:32	3.90	3.13			
			:34	4.20	3.27			
			:35	.60	3.28			
			:37	5.10	3.45			
			:38	1.80	3.48			
			:45	2.83	3.81			
			:52	.34	3.85			
			:53	1.80	3.88			
			:54	.60	3.89			
			:56	3.30	4.00			
			:57	2.40	4.04			
			7:00	.60	4.07			
			:04	.45	4.10			
			:07	2.00	4.20			
			:11	.30	4.22			
			:16	.36	4.25			
			ceased					
			:25	0	4.25			
			:31	.20	4.27			
			:35	2.10	4.41			
			:38	.60	4.44			
			8:00e	.03	4.45			
Notes: To convert runoff in in/hr to cfs multiply by 13.91.								

Cohocton, New York			Watershed W-II (2.2)			13.8 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of May 25-27, 1943								
4-25-43	.15	0	5-25-43	Raingage	R-1	5-26-43		
4-27	1.02	.0009	6:00p	0	.182/	12:33a	0	0
4-28	.02	0	:10	.12	.20	:39	.001	.0006
4-29	.02	0	:32	.08	.23	:43	.005	.0009
4-30	1.111/	.0535	:35	.40	.25	:54	.009	.0023
5-1	.08 (snow)	.0476	7:00	.07	.28	1:00	.011	.0033
5-2	.03	.0038	:15	.08	.30	:04	.011	.0040
5-3	.07	.0101	:22	.17	.32	:10	.013	.0052
5-4	.08	.0011	8:00	.03	.34	:16	.015	.0066
5-6	.10	.0006	:40	.02	.35	:22	.018	.0083
5-7	.65	.0004	9:00	.03	.36	:28	.023	.0103
5-8	.43	.0098	:20	.03	.37	:34	.028	.0129
5-10	.15	.0007	:37	.04	.38	:40	.032	.0159
5-11	.46	.0072	:50	.09	.40	2:10	.032	.0319
5-12	.20	.0019	10:00	.06	.41	:20	.026	.0368
5-17	.23	0	:15	.04	.42	:30	.018	.0405
5-18	.04	0	:23	.08	.43	:40	.011	.0429
5-19	.49	0	ceased			:50	.007	.0443
5-20	.10	0	11:03	0	.43	3:02	.005	.0454
5-21	.70	.0007	:42	.06	.47	:14	.003	.0462
5-22	.05	0	:50	.30	.51	:20	.003	.0465
5-25	.182/	0	12 Mt	.24	.55	4:35	.003	.0500
			5-26-43			:55	.002	.0508
			12:12a	.15	.58	5:20	.001	.0515
			:16	.90	.64	:45	.001	.0520
Watershed Conditions: Potatoes on contour strip 2 inches high on 4-inch ridges 5%; hay was uncut in 1942 and forms mulch on ground, while growth this year is about 5 inches high with sparse to medium stand on the remaining 95% of the area. Under saturated condition of watershed, subsurface flow was delayed 12 to 16 hours after precipitation infiltrated under mulch.			:17	3.60	.70	6:25	.002	.0530
			:20	.40	.72	:55	.003	.0542
			:24	.75	.77	7:50	.004	.0572
			:27	1.60	.85	9:00	.005	.0621
			:30	.60	.88	11:30	.005	.0743
			:35	.84	.95	12 N	.005	.0769
			:44	.20	.98	:40	.007	.0809
			:46	1.20	1.02	6:40	.008	.1235
			:50	.30	1.04	8:00	.007	.1331
			:54	.45	1.07	9:00	.007	.1398
			:56	1.80	1.13	12 Mt	.006	.1587
			1:00	.30	1.15	5-27-43		
			:03	.60	1.18	2:00a	.005	.1699
			:04	5.40	1.27	5:00	.004	.1834
			:06	.90	1.30	8:00	.003	.1933
			:13	.60	1.37	11:00	.002	.2005
			:19	.70	1.44	12 N	.001	.2020
			:27	.45	1.50	2:00p	.001	.2038
			:30	.80	1.54	7:20e	0	.2047
			:35	.36	1.57			
			:37	1.50	1.62			
			:41	.45	1.65			
			:43	1.20	1.69			
			:47	.60	1.73			
			:54	.17	1.75			

Notes: 1/ Included .16" snow beginning 8:10p.
2/ 1:00p to 5:50p.
To convert runoff in in/hr to cfs multiply by 13.91.

Cohocton, New York			Watershed W-II (2.2)			13.8 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of May 25-27, 1943 Cont'd								
			2:00a ceased	.10	1.76			
			:46	0	1.76			
			3:00 ceased	.04	1.77			
			:10	0	1.77			
			:25	.12	1.80			
			:38 ceased	.09	1.82			
			:48	0	1.82			
			4:00	.10	1.84			
			:03	.20	1.85			
			5:00	.01	1.86			
			6:00	.01	1.87			
			7:00	.01	1.88			
			8:00	.01	1.89			
			9:00e	.01	1.90			
Notes: To convert runoff in in/hr to cfs multiply by 13.91.								





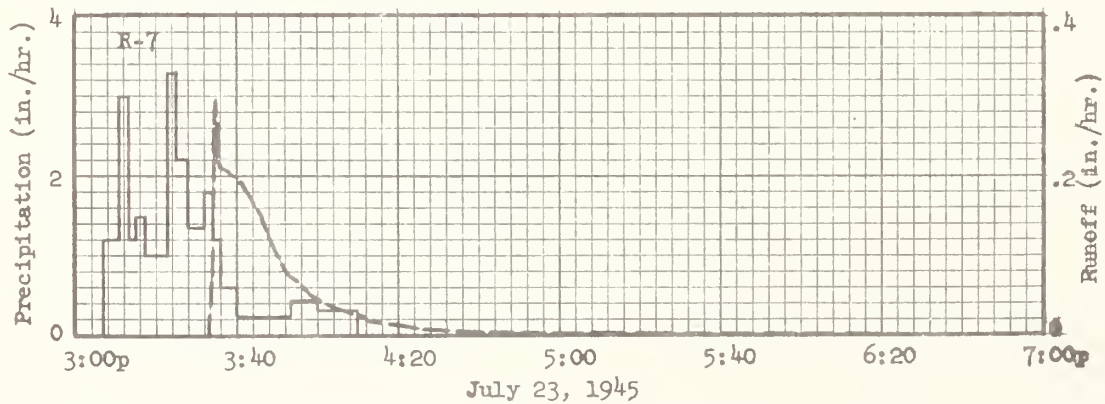
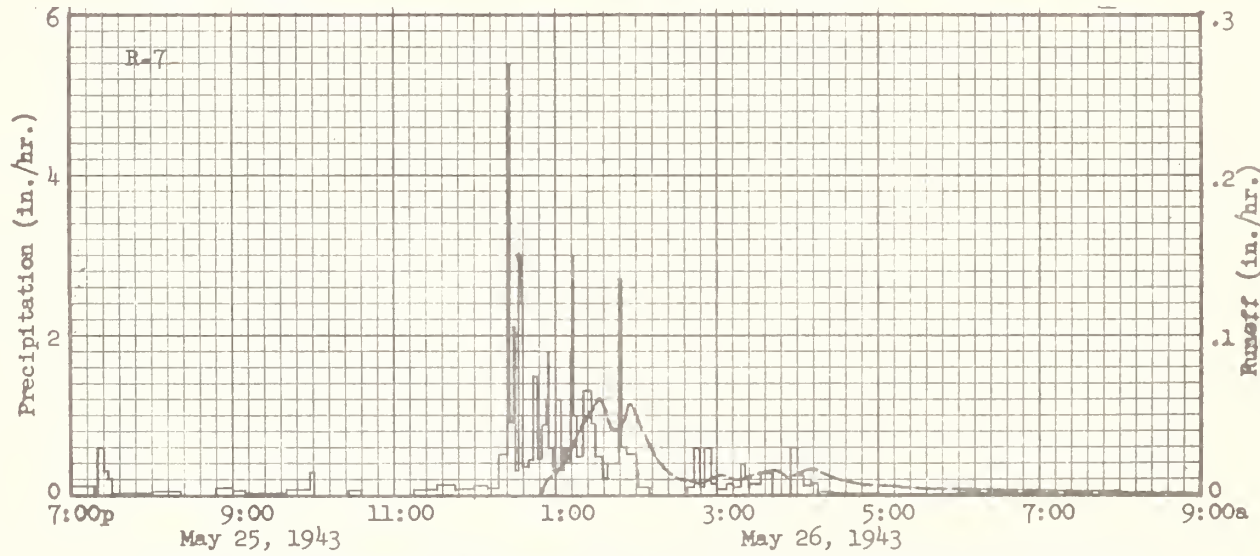
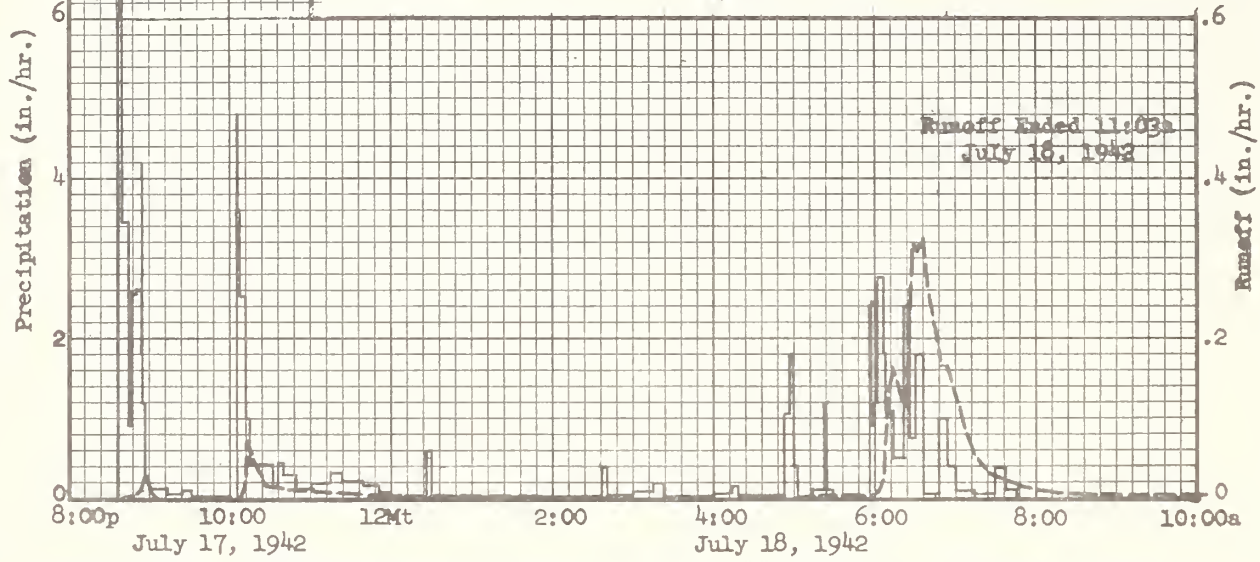
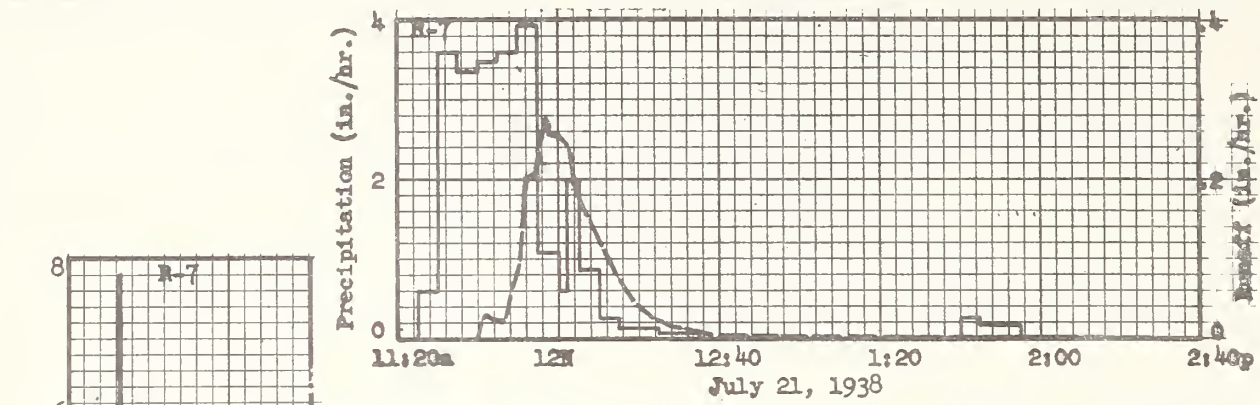
Cohocton, New York			Watershed W-III (2.3)			24.2 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 21, 1938								
6-25-38	.25	0	7-21-38	Raingage	R-7	7-21-38		
6-26	.50	0	11:25a	0	0	11:40a	0	0
6-27	.15	0	:30	.60	.05	:42	.031	.0005
7-1	.28	0	:35	3.60	.35	:42½	.028	.0007
7-9	.27	0	:40	3.36	.63	:46	.021	.0021
7-11	.76	0	:45	3.48	.92	:48	.048	.0033
7-18	.19	0	:50	3.60	1.22	:49	.073	.0043
			:55	3.96	1.55	:50½	.100	.0065
			12 N	1.08	1.64	:51½	.171	.0088
			:02	.60	1.66	:52	.200	.0103
Watershed Conditions: Tillage on contour strips within 1% of contour; potatoes 15 inches high with 5-inch ridges 9%, with 2-inch ridges 14%; beans 2%; permanent meadow 12 inches high 5%; timothy hay stubble 4 inches high 29%; cover hay stubble 4 inches high 16%; barley 24 inches high 10%; oats 30 inches high 10%; buckwheat 10 inches high 5%.			:05	2.00	1.76	:54	.203	.0170
			:10	.84	1.83	:56	.257	.0247
			:15	.24	1.85	:57	.276	.0291
			:25	.12	1.87	:57½	.257	.0313
			:35e	.06	1.88	12 N	.257	.0420
			1:40p	0	1.88	:02	.245	.0504
			:45	.24	1.90	:03	.226	.0543
			:55e	.18	1.93	:04	.195	.0578
						:07	.151	.0665
						:11½	.109	.0762
						:15	.074	.0815
						:18½	.047	.0850
						:22½	.028	.0875
						:27½	.015	.0893
						:30	.012	.0898
						:34½	.007	.0905
						:46	.002	.0914
						:54	.002	.0917
						1:10	.001	.0920
						2:38e	0	.0925
Event of July 17-18, 1942								
6-17-42	.34	0	7-17-42	Raingage	R-7	7-17-42		
6-19	.20	0	8:37p	0	0	8:40p	0	0
6-21	.29	0	:38	6.00	.10	:47	.001	.0001
6-23	.16	0	:40	7.80	.36	:53	.010	.0004
6-30	1.53	.0003	:44	3.45	.59	:56	.027	.0014
7-4	.05	0	:46	.90	.62	:57	.025	.0018
7-6	.26	0	:50	2.55	.79	9:01	.009	.0030
7-8	.14	0	:53	2.60	.92	:05	0	.0032
7-10	1.66	.0009	:54	1.80	.95	ceased		
7-11	.11	0	:55	4.20	1.02	10:05	0	.0032
7-17	.10½	0	:57	1.20	1.06	:10	.009	.0034
			9:00	.20	1.07	:12	.026	.0039
			:14	.13	1.10	:14	.074	.0057
			:25	.05	1.11	:18	.057	.0100
			:31	.10	1.12	:28	.016	.0151
			10:00	.02	1.13	:43	.008	.0177
			ceased			:49	.010	.0186
			:05	0	1.13	11:13	.005	.0213
			:06	4.80	1.21	7-18-42		
			:07	3.60	1.27	1:54e	0	.0261
Notes: 1/ 9:41a to 11:12a. To convert runoff in in/hr to cfs multiply by 24.40.								

Cohocton, New York			Watershed W-III			(2.3)			24.2 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of July 17-18, 1942 Cont'd											
Watershed Conditions: Tillage on contour strips: potatoes 15 inches high on 5-inch ridges 16%; corn 30 inches high 2%; timothy hay 30 inches high thick stand 24%; timothy hay stubble 4 inches high 6%; clover hay 24 inches high thick stand 17%; clover hay stubble 4 inches high 12%; oats 25 inches high thick stand 23%.			10:12p	2.52	1.48	5:02a	0	0			
			:15	1.00	1.53	:15	.001	.0004			
			:32	.42	1.65	:33	.002	.0009			
			:36	.15	1.66	:41	.002	.0012			
			:40	.45	1.69	:58	.001	.0017			
			:50	.30	1.74	6:03	.006	.0020			
			11:00	.12	1.76	:06	.023	.0026			
			:16	.19	1.81	:09	.092	.0049			
			:23	.34	1.85	:12	.147	.0113			
			:40	.21	1.91	:14	.164	.0166			
			:51	.16	1.94	:16	.156	.0219			
			12 Mt	.07	1.95	:22	.111	.0349			
			7-18-42	ceased		:24	.114	.0387			
			12:27a	0	1.95	:27	.223	.0467			
			:30	.60	1.98	:29	.319	.0559			
			2:37	.01	2.01	:31	.309	.0664			
			:40	.40	2.03	:36	.323	.0926			
			3:00	.03	2.04	:40	.265	.1124			
			:16	.08	2.06	:50	.165	.1458			
			:22	.20	2.08	:54	.165	.1568			
			4:00	.02	2.09	7:02	.120	.1760			
			:14	.04	2.10	:08	.080	.1860			
			:18	.15	2.11	:14	.056	.1928			
			:53	.02	2.12	:20	.041	.1976			
			:57	1.05	2.19	:26	.032	.2012			
			5:00	1.80	2.28	:32	.025	.2040			
			:03	.40	2.30	:39	.021	.2067			
			ceased			:51	.013	.2101			
			:16	0	2.30	8:03	.008	.2121			
			:22	.10	2.31	:15	.006	.2134			
			:24	1.20	2.35	:27	.004	.2144			
			:30	.10	2.36	:39	.003	.2151			
			ceased			:51	.002	.2157			
			:57	0	2.36	9:03	.002	.2162			
			:58	2.40	2.40	:23	.002	.2168			
			6:00	.90	2.43	:43	.001	.2172			
			:02	1.20	2.47	11:03e	0	.2178			
			:07	2.76	2.70						
			:09	1.80	2.76						
			:14	1.08	2.85						
			:21	.51	2.91						
			:27	2.40	3.15						
			:31	.75	3.20						
			:36	1.80	3.35						
			:48	.05	3.36						
			:54	1.00	3.46						
			7:00	.40	3.50						
			:15	.08	3.52						
			:29	.04	3.53						
			:37	.38	3.58						
			:45e	.08	3.59						
Notes: To convert runoff in in/hr to cfs multiply by 24.40.											

Cohocton, New York			Watershed W-III (2.3)			24.2 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of May 25-26, 1943								
4-25-43	.18	0	5-25-43	Raingage	R-7 ^{2/}	5-26-43		
4-27	1.12	.0041	7:00p	.10	.19 ^{2/}	12:49a	0	0
4-28	.05	0	:17	.11	.22	:52	.003	.0001
4-30	1.21 ^{1/}	.0210	ceased			:54	.009	.0003
5-1	.07snow	0	:20	0	.22	:56	.011	.0007
5-2	.21	0	:23	.60	.25	1:00	.015	.0016
5-3	.05	0	:27	.30	.27	:02	.018	.0021
5-4	.07	0	:30	.20	.28	:05	.020	.0027
5-6	.07	0	8:00	.02	.29	:10	.024	.0045
5-7	.15	0	:20	.03	.30	:15	.034	.0069
			ceased					
5-8	1.15	.0101	:47	0	.30	:20	.043	.0101
5-10	.27	0	9:00	.09	.32	:25	.049	.0139
5-11	.50	0	:10	.06	.33	:30	.059	.0184
5-12	.22	0	:40	.02	.35	:32	.060	.0204
5-17	.15	0	:56	.08	.37	:34	.060	.0224
5-18	.01	0	10:00	.30	.39	:37	.052	.0252
5-19	.57	0	ceased			:40	.046	.0276
5-20	.13	0	:25	0	.39	:43	.040	.0298
5-21	.96	.0055	:35	.06	.40	:48	.040	.0331
5-22	.03	0	ceased			:51	.050	.0354
5-25	.19 ^{2/}	0	11:14	0	.40	:54	.057	.0381
			:31	.07	.42	:58	.057	.0429
			:45	.13	.45	2:04	.044	.0471
			12 Mt	.07	.47	:09	.033	.0503
			5-26-43			:15	.023	.0531
			12:10a	.12	.49	:21	.017	.0551
			:16	.10	.50	:27	.013	.0566
			:24	.50	.55	:33	.010	.0578
			:25	4.80	.63	:39	.009	.0587
			:26	5.40	.72	:44	.008	.0594
			:28	.90	.75	:50	.009	.0603
			:30	2.10	.82	:56	.011	.0613
			:32	.30	.83	3:02	.012	.0625
			:34	3.00	.93	:06	.012	.0633
			:35	2.40	.97	:15	.010	.0650
			:40	.36	1.00	:19	.010	.0657
			:44	.45	1.03	:25	.012	.0668
			:46	1.50	1.08	:31	.013	.0680
			:50	.45	1.11	:41	.014	.0702
			:52	.90	1.14	:47	.014	.0716
			:53	1.20	1.16	:53	.011	.0729
			:54	1.80	1.19	:58	.011	.0739
			:58	.60	1.23	4:04	.014	.0752
			1:00	.30	1.24	:10	.016	.0767
			:04	1.20	1.32	:14	.016	.0778
			1:06	.30	1.33	:20	.013	.0793
			:08	.60	1.35	:26	.011	.0805
			:11	.40	1.37	:32	.010	.0815
			:12	1.80	1.40	:38	.008	.0824
			:13	3.00	1.45	:46	.007	.0834
Watershed Conditions: Tillage on contour strips within 1% of contour: potatoes just coming up with 3-inch ridges 10%; buckwheat drilled, not up yet 4%; oats 2 to 4 inches high 18%; clover 8 inches high 23%; timothy hay 6 inches high 45%.								
Notes: 1/ Included .10 inches snow 8:00p. 2/ 1:00p to 7:00p, rain continuing. To convert runoff in in/hr to cfs multiply by 24.40.								

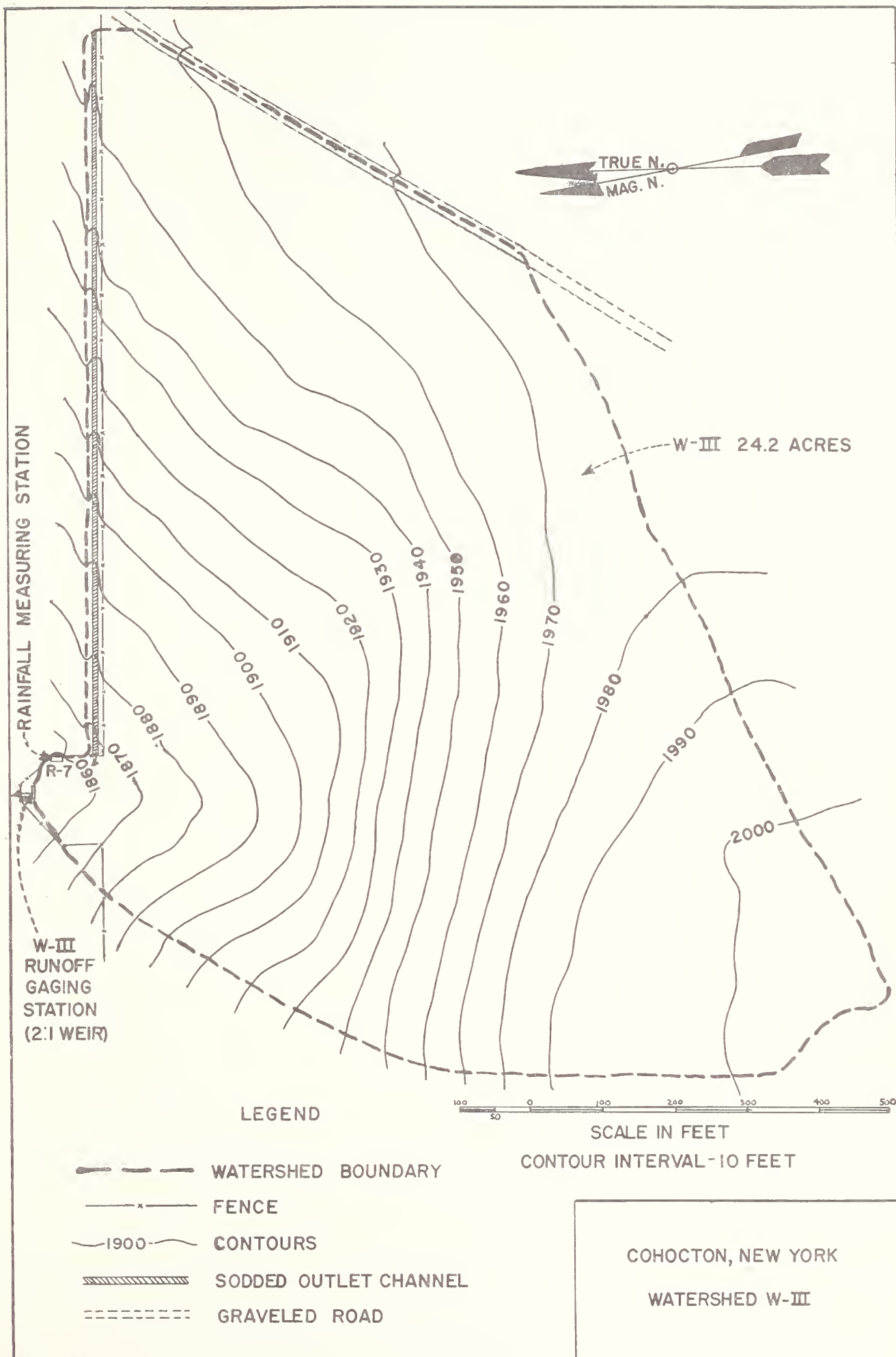
Cohocton, New York			Watershed W-III (2.3)			24.2 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of May 25-26, 1943 Cont'd.								
			1:16a	1.00	1.50	4:55a	.006	.0843
			:21	.48	1.54	5:05	.005	.0851
			:26	1.32	1.65	:17	.004	.0859
			:30	.90	1.71	:29	.003	.0866
			:35	.48	1.75	6:09	.002	.0883
			:38	.20	1.76	:54	.001	.0893
			:47	.40	1.82	7:45	.001	.0898
			:49	2.70	1.91	8:57e	0	.0900
			:53	.60	1.95			
			2:00	.51	2.01			
			:02	.30	2.02			
			:10	.08	2.03			
			ceased					
			:38	0	2.03			
			:44	.10	2.04			
			:47	.60	2.07			
			:53	.10	2.08			
			:56	.60	2.11			
			3:00	.15	2.12			
			:08	.08	2.13			
			:12	.15	2.14			
			:17	.12	2.15			
			:20	.40	2.17			
			:25	.24	2.19			
			:33	.15	2.21			
			:42	.27	2.25			
			ceased					
			:55	0	2.25			
			4:00	.60	2.30			
			:05	.24	2.32			
			:10	.12	2.33			
			:14	.15	2.34			
			:25	.05	2.35			
			5:00	.02	2.36			
			6:00	.01	2.37			
			7:00	.02	2.39			
			8:00e	.04	2.43			
Event of July 23, 1945								
6-25-45	.35	0	7-23-45	Raingage	R-7	7-23-45		
6-30	.60	0	3:07p	0	0	3:33p	0	0
7-2	.09	0	:11	1.20	.08	:34	.113	.0004
7-8	.09	0	:13	3.00	.18	:34 $\frac{3}{4}$.296	.0043
7-9	.17	0	:15	1.20	.22	:35	.224	.0054
7-10	.25	0	:17	1.50	.27	:36	.214	.0090
7-14	.72	0	:23	1.00	.37	:37	.210	.0125
7-15	.43	0	:25	3.30	.48	:38	.208	.0160
7-16	.05	0	:28	2.20	.59	:39	.200	.0194
7-18	.89	.0036	:32	1.35	.68	:40	.200	.0227
Notes: To convert runoff in in/hr to cfs multiply by 24.40.								

Cohocton, New York			Watershed W-III (2.3)			24.2 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 23, 1945 Cont'd.								
7-19-45	.47	0	3:34p	1.80	.74	3:45p	.158	.0376
7-22	.40	0	:36	1.20	.78	:48	.122	.0446
7-23	.15 ¹ / ₂	0	:40	.60	.81	:50	.102	.0483
			:53	.23	.86	:53	.077	.0528
			4:00	.43	.91	:55	.067	.0552
Watershed Conditions: Tillage in large fields mostly off the contour: potatoes 15 inches high on 5-inch ridges in straight rows, up and down the slope 38%; potatoes in straight rows across the slope 23%; tim- othy hay uncut 20 to 30 inches high medium stand 39%.			:10e	.30	.95	:57	.057	.0572
						4:00	.048	.0599
						:04	.036	.0627
						:06	.033	.0638
						:09	.028	.0654
						:11	.023	.0666
						:13	.019	.0669
						:15	.018	.0675
						:20	.012	.0688
						:25	.008	.0696
						:27	.007	.0699
						:30	.006	.0702
						:35	.005	.0706
						:40	.004	.0710
						:48	.003	.0714
						:55	.002	.0716
						5:20	.001	.0722
						6:32e	0	.0726
Notes: ¹ / ₂ 7:43a to 9:00a. To convert runoff in in/hr to cfs multiply by 24.40.								



Cohocton, New York

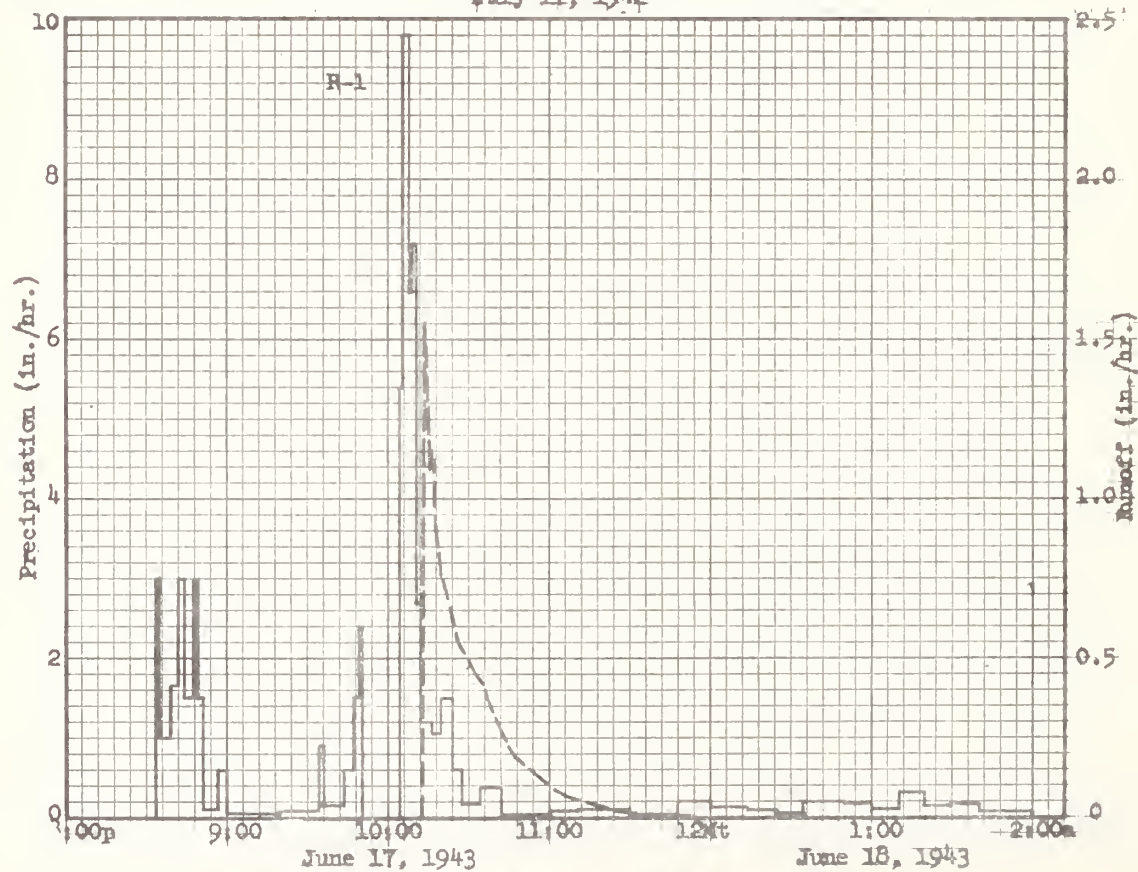
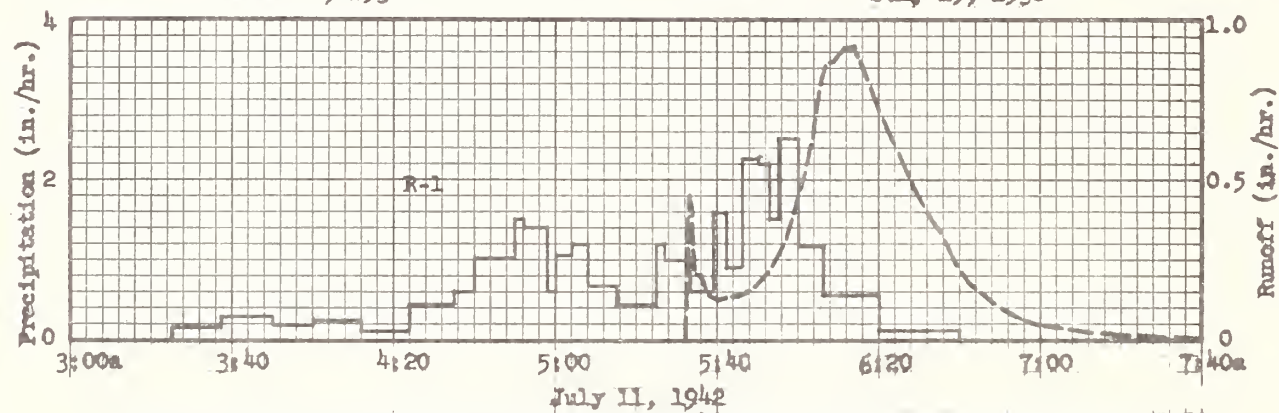
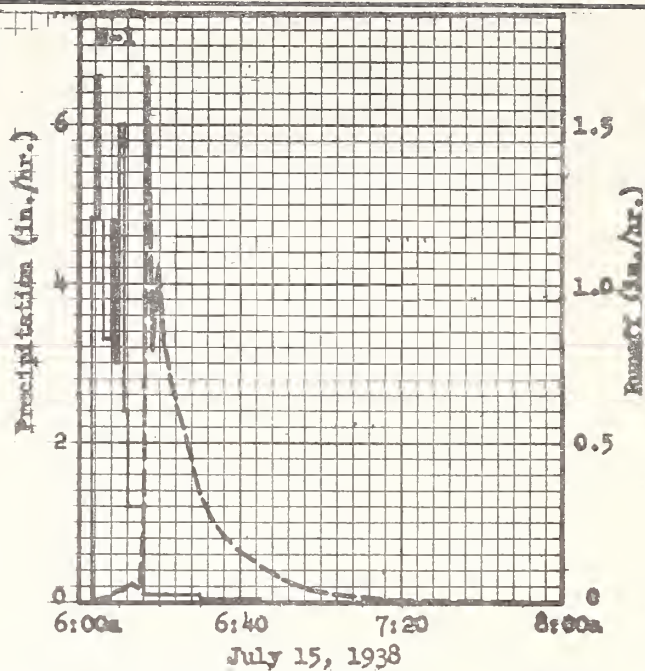
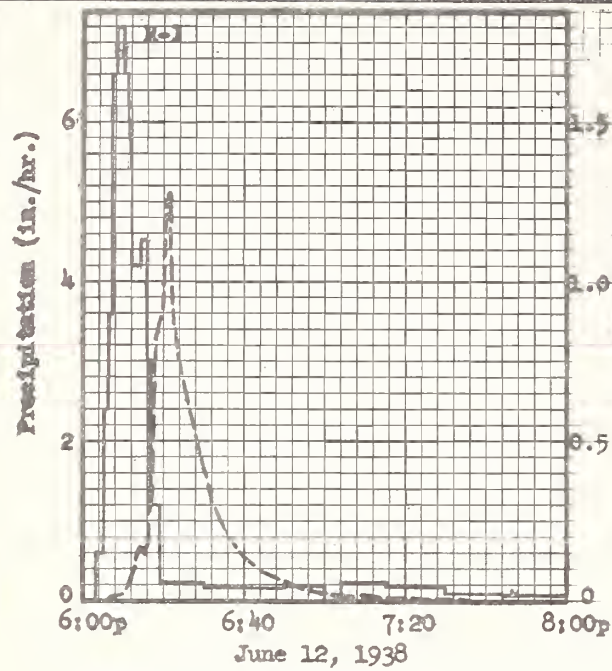
Watershed W-III



Freehold, New Jersey			Watershed W-I			(4.1)			Area 15.7 acres <u>2/</u>		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of June 12, 1938 15.7 ac. <u>2/</u>											
5-12-38	0.27	0	6-12-38	Raingage	R-1	6-12-38					
5-14	.63	T	6:03p	0	0	6:06p	0	0			
5-15	.55	.001	:05	.60	.02	:07	.018	0			
5-22	.29	0	:06	2.40	.06	:08	.018	.001			
5-24	.31	0	:07	3.60	.12	:09	.019	.001			
5-26	.62	0	:08	6.60	.23	:10	.021	.001			
5-27	.47	.001	:10	7.20	.47	:11	.049	.002			
6-3	.02	0	:11	6.60	.58	:12	.075	.003			
6-4	.12	0	:12	6.00	.68	:13	.107	.004			
6-8	.33	0	:14	4.20	.82	:14	.167	.007			
6-12	.33 <u>1/</u>	0	:16	4.50	.97	:15	.149	.009			
			:17	3.00	1.02	:16	.170	.012			
			:19	1.20	1.06	:17	.392	.017			
			:30	.22	1.10	:18	.818	.027			
			:50	.15	1.15	:19	.888	.041			
Watershed conditions: Contour tillage parallel with terrace ridges: carrots 10 inches high 13%; peas 8 inches high 14%; broccoli 6%; spinach 2 inches high 2%; fallow (bare ground) 42%; Sudan grass 4 inches high 13%. Grass in terrace outlet channel 8%; lanes, etc., 2%. (Percentages based on 15.7 acres)			7:00	.18	1.18	:20	.913	.056			
			(ceased)	0	0	:21	1.28	.074			
			:04	0	1.18	:22	.930	.093			
			:15	.22	1.22	:23	.791	.107			
			:30	.16	1.26	:26	.620	.142			
			:44	.09	1.28	:32	.308	.188			
			8:00e	.08	1.30	:35	.223	.202			
						:38	.163	.211			
						:44	.092	.224			
						:50	.053	.231			
						:56	.034	.236			
						7:02	.021	.238			
						:14	.007	.241			
						:36e	0	.242			
			Event of July 15, 1938 15.7 ac. <u>2/</u>								
6-18-38	0.09	0	7-15-38	Raingage	R-1	7-15-38					
6-23	2.17	.687	6:03a	0	0	6:03a	0	0			
6-26	1.55	.582	:04	4.80	.08	:07	.017	.001			
6-27	4.02	1.705	:05	6.60	.19	:09	.037	.002			
6-28	.23	.001	:06	4.80	.27	:11	.042	.003			
7-1	.02	0	:08	3.30	.38	:13	.051	.005			
7-9	.24	T	:09	4.80	.46	:15	.048	.006			
7-11	.25	.001	:10	3.00	.51	:16	.204	.008			
7-12	.14	0	:11	6.00	.61	:17	1.68	.023			
7-14	.44	.001	:12	2.40	.65	:18	.79	.045			
Watershed conditions: Contour tillage parallel with terrace ridges: carrots 15 inches high 13%; cucumbers 3 ft. vines 6%; beans 10 inches high 8%; pea ground plowed 14%; Sudan grass cover crops 4 to 25 inches high 49%. Grass in terrace outlet channel 8%; lanes, etc., 2%. (Percentages of 15.7 acres)			:16	1.20	.73	:19 ¹ / ₂	1.06	.067			
			:30	.09	.75	:21	.802	.090			
			:45e	.04	.76	:27	.482	.154			
						:33	.258	.190			
						:39	.161	.211			
						:51	.068	.233			
						7:15	.008	.246			
						:50e	0	.247			
Notes: <u>1/</u> .30 inches of rain 12:10a to 2:08a and .03 inches between 4:00p and 5:30p.											
<u>2/</u> To convert runoff in in/hr to cfs multiply by 15.83. (To 8-17-38)											

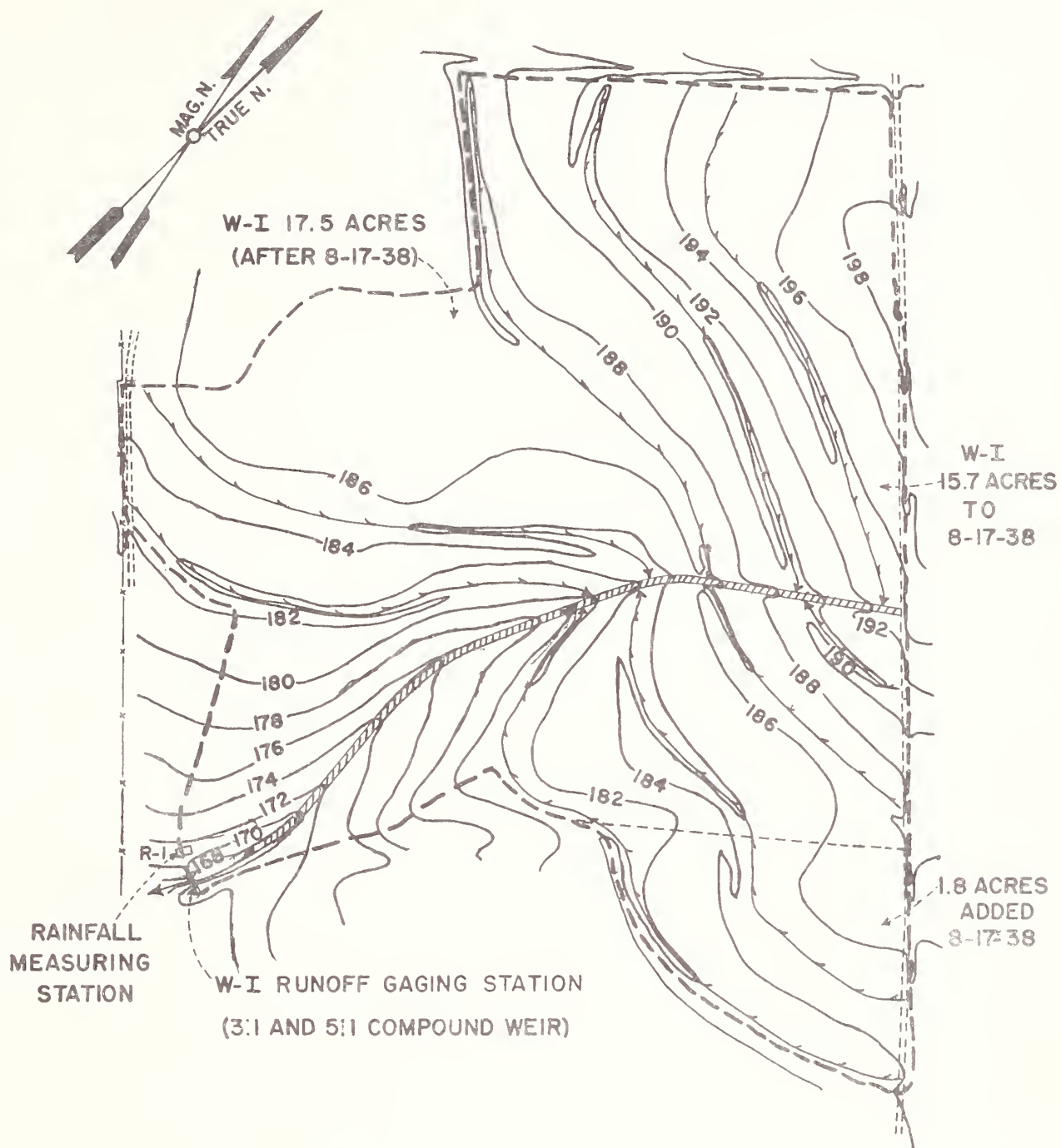
Freehold, New Jersey			Watershed W-I			(4.1)	Area 17.5 acres <u>1/</u>		
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of July 11, 1942 17.5 ac. <u>2/</u>									
6-11-42	0.52	0	7-11-42	Raingage	R-1	7-11-42			
6-12	.23	0	3:25a	0	0	5:32a	0	0	
6-13	.50	0	:37	.15	.03	:33	.451	.004	
6-14	.34	0	:50	.28	.09	:34	.218	.010	
6-17	.10	0	4:00	.18	.12	:35	.202	.013	
6-22	.10	0	:12	.25	.17	:36	.203	.017	
6-26	.05	0	:24	.10	.19	:37	.180	.020	
6-27	.20	0	:35	.44	.27	:38	.143	.023	
7-1	.06	0	:40	.60	.32	:40	.129	.027	
7-2	2.42	.048	:50	1.02	.49	:45	.136	.038	
7-3	.07	0	:52	1.50	.54	:48	.152	.045	
7-6	.03	0	:58	1.40	.68	:51	.189	.054	
			5:00	.60	.70	:54	.240	.065	
			:04	1.05	.77	:57	.319	.078	
			:08	1.20	.85	6:00	.439	.097	
Watershed conditions: Contour tillage parallel with cropland terrace ridges: carrots 4 inches high 13%; spinach 4 inches high 8%; mustard and turnips, bare to 1 inch high 5%; beets 4 to 8 inches high 14%; Sudan grass 1 to 2 inches high 49%; mixed hay in terrace outlet channel and adjacent areas 15 inches high 8%; lanes and building 3%. (Percent- ages of 17.5 acres)			:15	.69	.93	:03	.603	.123	
			:25	.42	1.00	:05	.773	.146	
			:27	1.20	1.04	:07	.854	.173	
			:33	1.00	1.14	:09	.870	.202	
			:39	.60	1.20	:11	.911	.232	
			:42	1.60	1.28	:14	.918	.277	
			:46	.90	1.34	:17	.830	.321	
			:50	2.25	1.49	:20	.717	.360	
			:53	2.20	1.60	:23	.632	.394	
			:55	1.50	1.65	:27	.507	.432	
			6:00	2.52	1.86	:35	.328	.487	
			:06	1.70	2.03	:43	.168	.519	
			:20	.56	2.16	:55	.073	.542	
			:40e	.12	2.20	7:07	.030	.552	
						:40e	0	.558	
Event of June 17, 1943 17.5 ac. <u>2/</u>									
5-19-43	0.06	0	6-17-43	Raingage	R-1	6-17-43			
5-20	.91	0	8:34p	0	0	10:13p	0	0	
5-21	.23	0	:35	3.00	.05	:14	.981	.006	
5-26	.55	0	:38	1.00	.10	:14½	1.56	.016	
5-28	.03	0	:42	1.65	.21	:15	1.09	.027	
6-1	.24	0	:44	3.00	.31	:16	1.15	.046	
6-2	.16	0	:48	1.50	.41	:17	.975	.064	
6-7	.16	0	:49	3.00	.46	:18	.907	.079	
6-9	.12	0	:51	1.50	.51	:19	.850	.094	
			:57	.10	.52	:20	.760	.107	
Watershed conditions: Contour tillage parallel with cropland terrace ridges: lettuce 5 inches high 33%; spinach 4 inches high 18%; collards 8 to 15 inches high 19%; bare (fallow) 19%; hay and alfalfa 12 to 15 inches high 8%. Building and lanes 3%. (Percentages of 17.5 acres)			9:00	.60	.55	:22	.680	.131	
			:20	.06	.57	:24	.607	.153	
			:34	.09	.59	:26	.550	.172	
			:36	.90	.62	:29	.513	.199	
			:44	.15	.64	:32	.467	.223	
			:47	.60	.67	:35	.415	.245	
			:49	1.50	.72	:38	.346	.264	
			:51	2.40	.80	:41	.296	.280	
Notes: <u>1/</u> Area increased 8-17-38 from 15.7 to 17.5 acres by extending 2 lower terraces on east side of outlet channel.									
<u>2/</u> To convert runoff in in/hr to cfs multiply by 17.65.									

Freehold, New Jersey			Watershed W-I (4.1)			Area 17.5 acres <u>1/</u>		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of June 17, 1943, Cont'd. <u>2/</u>								
			(ceased)	0	0	10:44p	.239	.294
			10:04p	0	.80	:47	.197	.305
			:05	5.40	.89	:50	.175	.314
			:08	9.80	1.38	:54	.142	.324
			:09	6.60	1.49	:58	.113	.333
			:10	7.20	1.61	11:02	.088	.340
			:12	2.70	1.70	:06	.068	.345
			:16	1.20	1.78	:10	.056	.349
			:20	1.05	1.85	:15	.043	.353
			:24	1.50	1.95	:20	.029	.356
			:27	.60	1.98	:26	.021	.358
			:34	.17	2.00	:32	.011	.360
			:42	.38	2.05	:38	.007	.361
			11:00	.03	2.06	:44	.004	.362
			:10	.06	2.07	:54e	0	.362
			:30	.09	2.10			
			:48	.03	2.11			
			12 Mt.	.20	2.15			
			6-18-43					
			12:14a	.13	2.18			
			:25	.11	2.20			
			:35	.06	2.21			
			:50	.20	2.26			
			1:00	.18	2.29			
			:10	.12	2.31			
			:20	.30	2.36			
			:29	.13	2.38			
			:40	.16	2.41			
			2:00e	.06	2.43			
Notes: <u>1/</u> Area increased 8-17-38 from 15.7 to 17.5 acres by extending 2 lower terraces on east side of terrace outlet channel.								
<u>2/</u> To convert runoff in in/hr to cfs multiply by 17.65.								



Freehold, New Jersey

Watershed W-I



LEGEND

- WATERSHED BOUNDARY
- x— FENCE
- 180— CONTOURS
- ~> CROPLAND TERRACE CHANNELS
- //// TERRACE OUTLET CHANNEL
- FARM ROADS



SCALE IN FEET
CONTOUR INTERVAL - 2 FEET

FREEHOLD, NEW JERSEY
WATERSHED W-I

Freehold, New Jersey			Watershed W-II (4.2)			Area 34.2 ac. - 32.9 ac.		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 6, 1938 (34.2 ac.) ^{1/}								
7-9-38	0.17	0	8-6-38	Raingage	R-3	8-6-38		
7-11	.16	0	4:30p	0	0	4:48p	0	0
7-12	.12	0	:34	.45	.03	:51	.097	.002
7-14	.42	0	:39	2.40	.23	:52	.123	.004
7-15	.76	.104	:41	1.80	.29	:53	.271	.007
7-17	.04	0	:43	.60	.31	:54	.328	.012
7-18	.16	0	:49	3.30	.64	:55	.423	.018
7-19	.17	0	:50	6.60	.75	:56	.513	.026
7-20	2.61	.353	:52	3.30	.86	:57	.589	.035
7-21	.63	.005	:58	3.10	1.17	:59	.697	.057
7-22	.28	T	:59	1.80	1.20	5:00	.722	.068
7-23	.67	.005	5:00	4.80	1.28	:02	.748	.093
7-24	1.28	.156	:02	1.20	1.32	:03	.702	.105
7-29	.07	0	:03	4.20	1.39	:04	.737	.117
8-1	.08	0	:08	2.16	1.57	:05	.713	.129
8-4	.24	0	:12	2.25	1.72	:08	.713	.165
8-5	.03	0	:15	1.40	1.79	:11	.702	.200
			:25	.12	1.81	:17	.713	.271
			:28	.20	1.82	:20	.592	.304
			:35	.09	1.83	:22	.536	.322
			:42	.34	1.87	:24	.438	.339
			6:00	.07	1.89	:26	.391	.352
			:08	.15	1.91	:28	.326	.364
			:18e	.06	1.92	:30	.286	.375
						:33	.232	.388
			Raingage	R-2	1.89	:36	.190	.398
						:39	.151	.407
						:44	.089	.417
						:50	.059	.424
						:59	.028	.431
						6:11	.010	.434
						:29	.001	.436
						:42e	0	.436
Event of May 21, 1940 (32.9 ac.) ^{2/}								
4-18-40	0.09	0	5-21-40	Raingage	R-3	5-21-40		
4-19	.21	0	1:43p	0	0	2:09p	0	0
4-20	1.30	.012	:49	.10	.01	:11	.125	.002
4-21	.84	.035	:57	.15	.03	:12	.371	.006
4-22	.11	0	2:00	.20	.04	:13	.362	.012
5-1	.06	0	:02	.60	.06	:14	.675	.021
5-2	.10	0	:03	1.80	.09	:15	1.08	.036
5-4	.13	0	:04	9.60	.25	:16	1.41	.056
5-9	.15	0	:05	2.40	.29	:17	1.51	.081
5-11	.09	0	:07	4.50	.44	:18	1.47	.105
5-16	1.82	.040	:09	2.70	.53	:19	1.56	.131
5-17	.19	0	:10	4.80	.61	:20	1.64	.157
			:12	4.20	.75	:21	1.65	.185
			:15	.80	.79	:23	1.48	.237
			:17	3.00	.89	:25	1.22	.282
Notes: ^{1/} To convert runoff in in/hr to cfs multiply by 34.48. ^{2/} To convert runoff in in/hr to cfs multiply by 33.17.								

Freehold, New Jersey			Watershed W-II			(4.2)		Area 32.9 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of May 21, 1940, Cont'd. ^{1/}									
Watershed Conditions: Straight row cultivation off-contour: corn just planted with grass waterways 38%; potatoes 3 inches high 21%; oats 18 inches high 11%. Contour strips: corn 3 inches high 6%; soybeans 2 inches high 2%; winter wheat 15 inches high 12%. Grass 10 inches high with brush 4%; lanes, roads and barn 6%. 17 tons soil deposited above 3 x 6 ft., drop inlet culvert near R-2 raingage.			2:19p	.60	.91	2:27p	.964	.318	
			:21	1.20	.95	:29	.784	.347	
			:33	.10	.97	:35	.398	.404	
			:38	.12	.98	:39	.240	.425	
			:46	.15	1.00	:43	.155	.438	
			3:00	.09	1.02	:50	.077	.451	
			:10e	.06	1.03	3:00	.031	.460	
						:10	.011	.463	
			Raingage R-2		1.39	:30	.002	.465	
			Weighted average ^{2/}		1.15	:46e	0	.465	
			Event of July 11, 1942 ^{1/}						
6-11-42	0.16	0	7-11-42	Raingage	R-3	7-11-42			
6-12	.18	0	3:18a	0	0	4:56a	0	0	
6-13	.37	0	:38	.18	.06	5:04	.010	.001	
6-14	.25	0	:41	.20	.07	:06	.012	.001	
6-17	.10	0	4:00	.22	.14	:08	.013	.001	
6-22	.06	0	:13	.18	.18	:12	.015	.002	
6-23	.03	0	:26	.09	.20	:20	.017	.005	
6-26	.04	0	:32	.40	.24	:26	.027	.007	
6-27	.22	0	:37	.72	.30	:32	.035	.010	
7-1	.12	0	:41	.75	.35	:39	.042	.014	
7-2	2.60	.017	:44	1.40	.42	:42	.053	.017	
7-4	.10	0	:46	.90	.45	:45	.063	.020	
7-6	.08	0	:55	1.53	.68	:48	.077	.023	
			:57	2.70	.77	:51	.088	.027	
			5:00	.80	.81	:54	.107	.032	
Watershed Conditions: Straight row cultivation and planting: corn 6 ft. high 33%, potatoes 18 inches high 21% (both with 4-inch ridges); soybeans 10 inches high 16%. Contour strips or tillage: corn 6 ft. high 2%; soybeans 10 inches high 10%; hay 20 inches high 7%. Grass and brush 6%; lanes, roads and barn 6%. Diver- sion terrace 600 ft. long built on southerly slope between contour strips 8-14-40.			:04	.75	.86	:57	.131	.038	
			:06	1.50	.91	6:00	.159	.045	
			:07	2.40	.95	:02	.178	.051	
			:14	.77	1.04	:06	.191	.063	
			:17	1.60	1.12	:09	.210	.073	
			:23	.80	1.20	:10	.226	.077	
			:25	1.50	1.25	:12	.225	.084	
			:27	.90	1.28	:15	.192	.095	
			:30	1.80	1.37	:18	.153	.103	
			:33	1.00	1.42	:21	.123	.110	
			:35	1.80	1.48	:24	.095	.116	
			:40	1.68	1.62	:27	.074	.120	
			:46	2.20	1.84	:30	.059	.123	
			:50	3.00	2.04	:33	.040	.126	
			:58	1.88	2.29	:36	.028	.127	
			6:00	.90	2.32	:39	.017	.128	
			:04	.75	2.37	:42	.012	.129	
			:07	1.00	2.42	:45	.008	.130	
			:15	.45	2.48	:51	.004	.130	
			:22	.34	2.52	7:00	.001	.131	
			:40e	.07	2.54	:11e	0	.131	
			7-11-42	R-2	2.52				

Notes: 1/ To convert runoff in in/hr to cfs multiply by 33.17.
2/ Thiessen method.

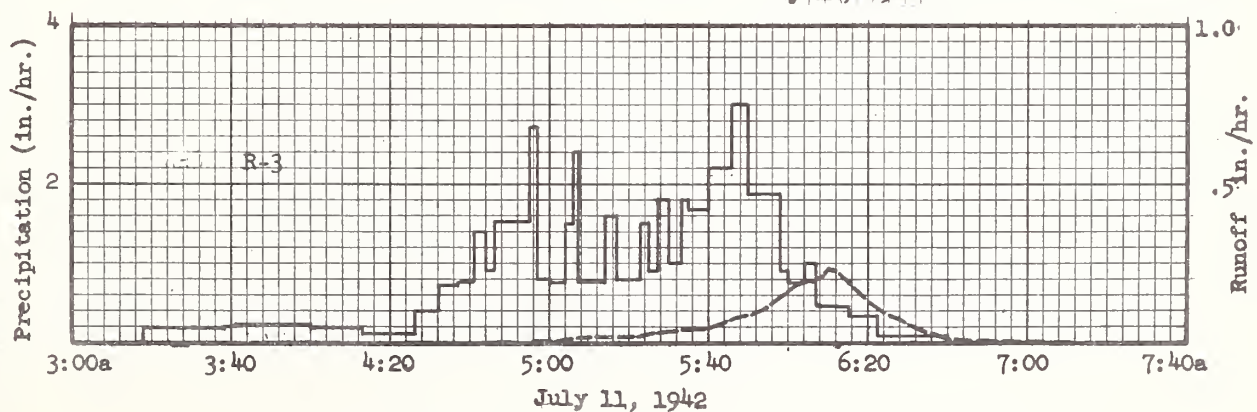
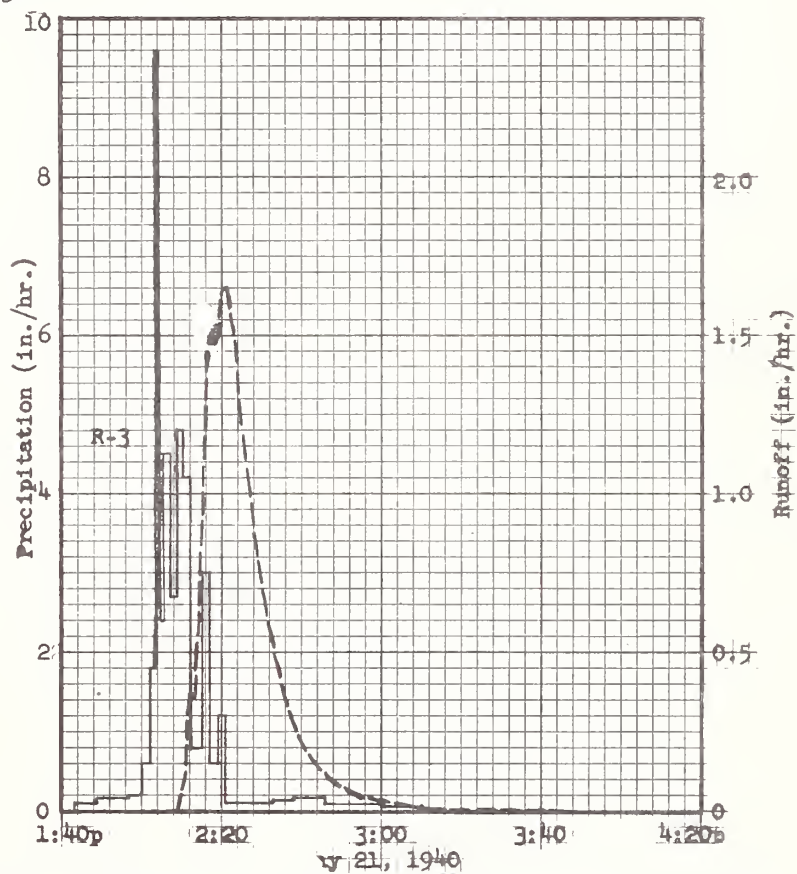
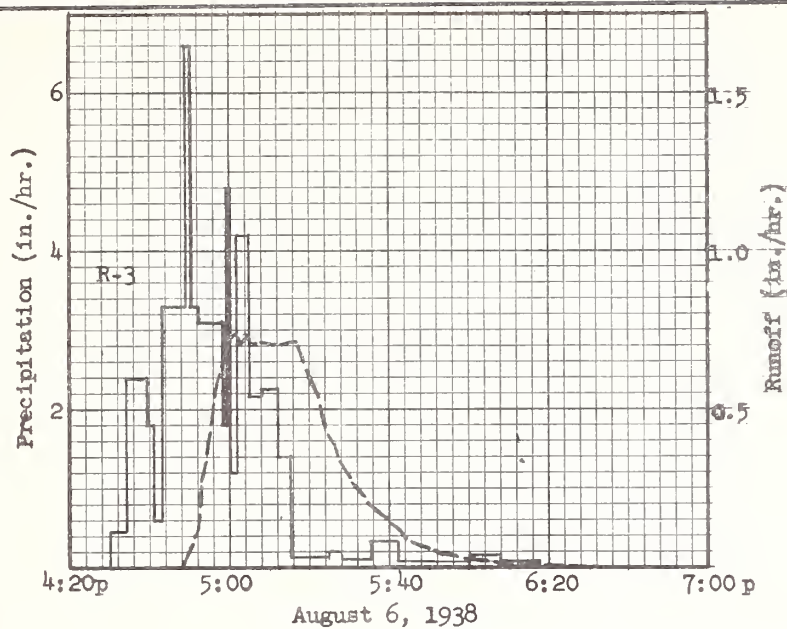
Freehold, New Jersey			Watershed W-II (4.2)			32.9 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity ^{1/} (in/hr)	Acc. (inches)	Date and time	Rate ^{2/} (in/hr)	Acc. (inches)
Event of August 3, 1950								
7-3-50	.22	0	8-3-50	Raingage	R-2	8-3-50		
7-4	.09	0	5:10a	0	0	8:39a	0	0
7-5	.38	0	:25	.08	.02	:44	.009	.001
7-6	.04	0	6:00	.02	.03	:47	.028	.002
7-9	.02	0	:30e	.04	.05	:49	.130	.004
7-10	1.89	.017	7:50a	0	.05	:51	.186	.010
7-11	.02	0	8:00	.06	.06	:53	.186	.016
7-13	.12	0	:15	.20	.11	:57	.156	.027
7-16	1.90	.157	:25	1.92	.43	9:03	.137	.041
7-17	.29	.009	:35	1.08	.61	:06	.144	.048
7-19	.02	0	:55	.57	.80	:09	.152	.056
7-20	.07	0	9:00	1.44	.92	:11	.152	.061
7-21	.10	0	:15	.36	1.01	:16	.137	.073
7-24	.07	0	:25	.84	1.15	:21	.126	.084
7-30	.74	.030	:30	1.56	1.28	:26	.116	.094
8-1	.02	0	:50	.24	1.36	:31	.148	.105
Watershed Conditions: Corn planted in straight rows off contour, 6 ft. high 69%; hay and alfalfa 10 inches high 19%; grass and brush 4%; roads, lanes, buildings and yard 8%.			10:00	.72	1.48	:34	.182	.113
			:30	.26	1.61	:38	.201	.126
			:50	.45	1.76	:42	.206	.140
			11:00	1.26	1.97	:44	.230	.147
			:20	.60	2.17	:48	.230	.162
			:40	.24	2.25	:54	.191	.183
			:50	.36	2.31	10:00	.141	.200
			12 N	.66	2.42	:06	.116	.213
			:20	.45	2.57	:12	.090	.223
			1:00p	.08	2.62	:18	.066	.231
			:40	.02	2.63	:40	.030	.247
			2:00e	.09	2.66	:54	.116	.257
						11:00	.201	.275
						:02	.220	.282
						:05	.283	.294
						:07	.283	.304
						:13	.220	.329
						:19	.160	.348
						:25	.122	.362
						:31	.099	.373
						:37	.079	.382
						:42	.073	.388
						:48	.076	.396
						:59	.059	.408
						12:06p	.071	.416
						:26	.043	.434
						:46	.015	.444
						1:06	.004	.446
						:26	.001	.447
						2:40e	0	.447

Notes: ^{1/} Intensities approximate, estimated from weekly raingage chart.
^{2/} To convert runoff in in/hr to cfs multiply by 33.17.

Freehold, New Jersey			Watershed W-II (4.2)			32.9 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate ^{2/} (in/hr)	Acc. (inches)
<u>Event of August 6, 1952</u>								
7-8-52	.74	.0023	8-6-52	Raingage	R-2 ^{1/}	8-6-52		
7-9	1.18	.0143	6:40p	0	0	7:56p	0	0
7-10	.28	.0032	7:00	.06	.02	:59	.0032	.0005
7-11	0	.0001	:10	.42	.09	8:00	.0176	.0007
7-16	.25	.0003	:20	1.38	.32	:01	.0485	.0013
7-17	.03	0	:30	3.12	.84	:02	.0684	.0023
7-18	.02	0	:40	1.56	1.10	:08	.0871	.0101
7-20	.30	0	:50	2.10	1.45	:13	.0708	.0167
7-21	.75	.0039	8:00	.12	1.47	:18	.0527	.0218
7-22	0	T	:20	.09	1.50	:23	.0341	.0254
7-27	.39	.0005	:25	.60	1.55	:28	.0210	.0277
7-31	.20	0	:45	.06	1.57	:33	.0121	.0291
8-2	.63	.0019	9:00	.12	1.60	:38	.0083	.0300
8-3	.02	0	:30	.18	1.69	:53	.0036	.0315
8-5	.03	0	10:00	.26	1.82	9:05	.0029	.0322
Watershed Conditions: An apple and peach orchard was planted in the fall of 1950 on the area with tree rows on a rectangular layout, parallel with the two roads, and considerably off the contour. Sod buffer strips 4 ft. wide had been left in the rows running north and south, with the recently harrowed strips between containing some residues from weeds cut down by the harrow.			:30	.14	1.89	:25	.0014	.0329
			:40	.36	1.95	:35	.0014	.0331
			11:00	.03	1.96	10:15	.0040	.0349
			12 Mt	.03	1.99	:25	.0055	.0357
			8-7-52			:32	.0083	.0365
			1:00a	.02	2.01	:36	.0083	.0371
			2:00e	.01	2.02	11:00	.0036	.0394
						:40	.0010	.0408
			3:30a	0	2.02	12 Mt	.0004	.0410
			4:00	.02	2.03	8-7-52		
			5:00	.01	2.04	12:30a	.0002	.0411
			:30	.02	2.05	1:00	.0001	.0412
			:40	.12	2.07	7:30e	0	.0413
			6:00	.03	2.08			
			7:00e	.01	2.09			
<u>Event of September 10-11, 1954⁴</u>								
8-11-54	.04	0	9-10-54	Raingage	R-2 ^{5/}	9-11-54		
8-15	.04	0	7:20p	0	0	12:01a	0	0
8-20	.07	0	8:00	.03	.02	:19	.0032	.0007
8-21	.85	.0020	:20	.06	.04	:23	.0060	.0010
8-26	.04	0	:28	.15	.06	:29	.0060	.0016
8-30 ^{3/}	.40	0	:43	.08	.08	:35	.0049	.0021
8-31 ^{3/}	1.97	.0273	:52	.20	.11	:45	.0036	.0028
9-7	.42	.0005	9:00	.08	.12	:55	.0049	.0035
Watershed Conditions: Buffer strips in orchard tree rows 3 ft. wide running north and south. Volunteer grass and weeds 10 to 15 inches tall had grown in intervening strips since harrowing and perforating implement operated over them the last of June, leaving small depressions in ground 18 inches apart on a staggered pattern.			:14	.13	.15	1:12	.0055	.0050
			:23	.07	.16	:18	.0071	.0056
			:33	.18	.19	:24	.0083	.0064
			:53	.12	.21	:34	.0071	.0077
			10:00	.17	.23	:40	.0055	.0083
			:15	.16	.27	:46	.0045	.0088
			:28	.05	.28	:54	.0045	.0094
			:37	.13	.30	:58	.0049	.0097
			:41	.30	.32	2:12	.0049	.0108
			:50	.13	.34	:18	.0083	.0115
			11:00	.06	.35	:24	.0121	.0125
Notes: 1/ Intensities approximate, estimated from weekly raingage chart.								
2/ To convert runoff in in/hr multiply by 33.17.								
3/ Carol Hurricane. 4/ Edna Hurricane. 5/ Intensities from 24 hr. chart.								

Freehold, New Jersey			Watershed W-II (4.2)			32.9 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity ^{1/} (in/hr)	Acc. . (inches)	Date and time	Rate ^{2/} (in/hr)	Acc. (inches)
Event of September 10-11, 1954 Cont'd. ^{3/}								
			11:15p	.08	.37	2:28a	.0222	.0136
			:30	.12	.40	:33	.0326	.0159
			:40	.18	.43	:38	.0280	.0184
			:50	.06	.44	:44	.0198	.0208
			:55	.60	.49	:48	.0146	.0219
			12 Mt	.96	.57	:52	.0176	.0230
			9-11-54			:56	.0138	.0240
			12:20a	.27	.66	3:00	.0138	.0249
			:30	.12	.68	:10	.0105	.0269
			:40	.30	.73	:22	.0105	.0290
			:55	.28	.80	:28	.0090	.0300
			1:00	.24	.82	:35	.0071	.0309
			:10	.42	.89	:40	.0113	.0317
			:15	.36	.92	:45	.0222	.0331
			:30	.20	.97	:50	.0250	.0351
			:45	.32	1.05	:55	.0165	.0368
			2:00	.24	1.11	4:00	.0121	.0380
			:10	.42	1.18	:05	.0129	.0390
			:15	.72	1.24	:10	.0210	.0404
			:25	1.62	1.51	:15	.0155	.0419
			:30	.36	1.54	:19	.0165	.0430
			:35	.48	1.58	:22	.0155	.0438
			:39	.45	1.61	:26	.0176	.0449
			:43	1.20	1.69	:30	.0155	.0460
			:47	.30	1.71	:35	.0138	.0472
			:52	.48	1.75	:40	.0105	.0482
			3:00	.45	1.81	:45	.0077	.0490
			:15	.48	1.93	:50	.0060	.0496
			:27	.20	1.97	:55	.0049	.0501
			:31	.75	2.02	5:00	.0113	.0508
			:43	1.10	2.24	:04	.0113	.0516
			:53	.30	2.29	:08	.0129	.0524
			:56	.60	2.32	:18	.0083	.0542
			4:00	.30	2.34	:21	.0113	.0547
			:03	1.80	2.43	:24	.0176	.0554
			:15	.45	2.52	:27	.0407	.0569
			:17	1.80	2.58	:29	.0615	.0586
			:25	.60	2.66	:35	.0466	.0640
			:32	.17	2.68	:40	.0295	.0672
			:44	.10	2.70	:45	.0155	.0691
			:48	.15	2.71	:50	.0105	.0702
			:52	1.05	2.78	:55	.0071	.0709
			:56	.45	2.81	6:00	.0045	.0714
			5:00	.90	2.87	:05	.0040	.0718
			:12	.15	2.90	:08	.0097	.0721
			:18	.80	2.98	:12	.0155	.0729
			:23	4.32	3.34	:18	.0235	.0749
			:25	2.10	3.41	:24	.0155	.0769
			:33	.68	3.50	:30	.0090	.0781
			:50	.07	3.52	:36	.0055	.0788
Notes: ^{1/} Intensities from 24 hour raingage chart.								
^{2/} To convert runoff in in/hr to cfs multiply by 33.17.								
^{3/} Edna Hurricane								

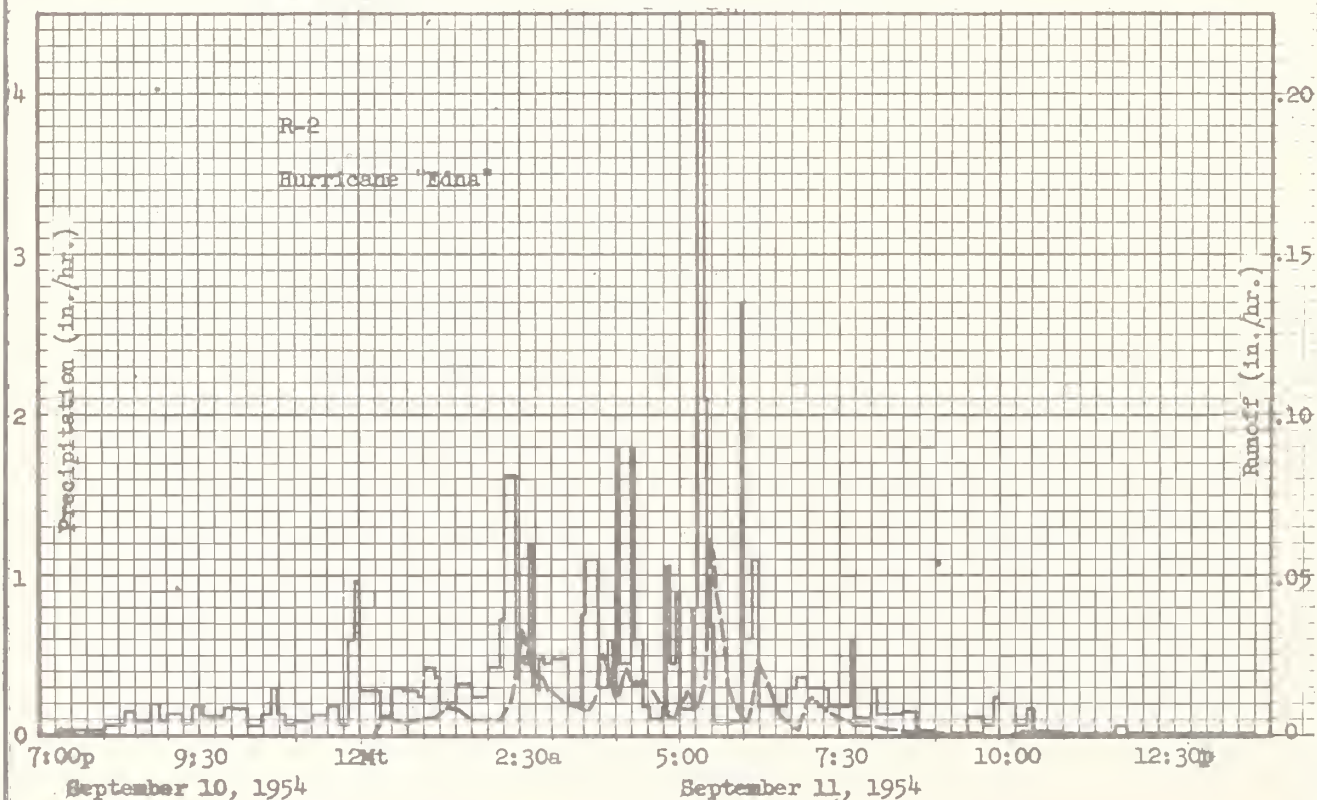
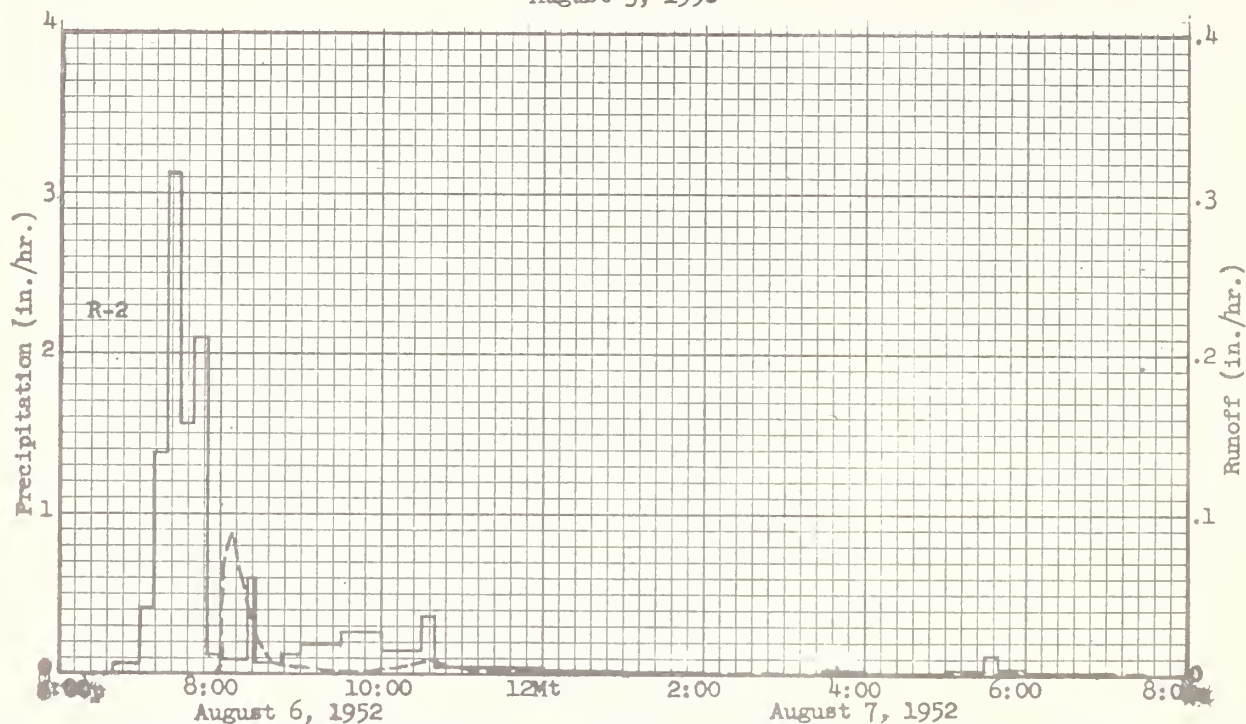
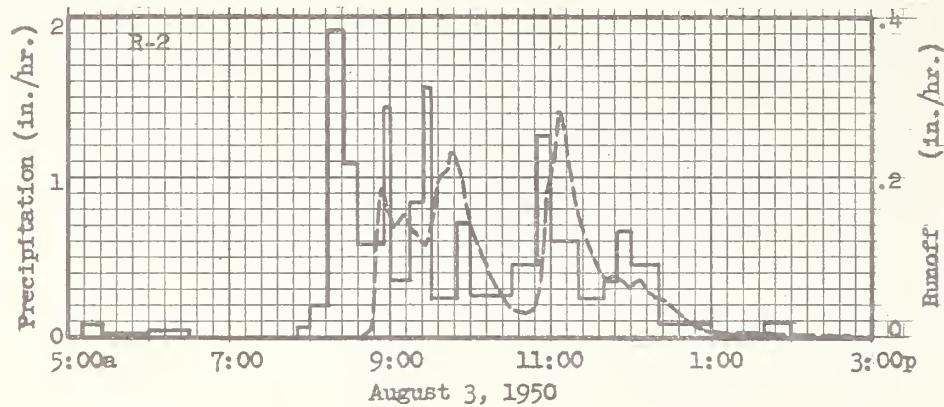
Freehold, New Jersey			Watershed W-II (4.2)			32.9 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity ^{1/} (in/hr)	Acc. (inches)	Date and time	Rate ^{2/} (in/hr)	Acc. (inches)
Event of September 10-11, 1954 Cont'd. ^{3/}								
			5:58a	.08	3.53	6:44a	.0029	.0794
			6:00	2.70	3.62	:52	.0019	.0797
			:08	.60	3.70	:56	.0065	.0800
			:14	1.10	3.81	:59	.0105	.0804
			:40	.18	3.89	7:05	.0113	.0815
			:50	.30	3.94	:20	.0083	.0839
			7:00	.36	4.00	:35	.0045	.0855
			:20	.30	4.10	:45	.0032	.0861
			:40	.18	4.16	:55	.0029	.0866
			:43	.60	4.19	8:10	.0022	.0872
			8:00	.11	4.22	:30	.0012	.0878
			:06	.30	4.25	:40	.0014	.0880
			:30	.13	4.30	:55	.0008	.0883
			:42	.15	4.33	9:10	.0002	.0884
			9:00	.03	4.34	:45	0	.0884
			Ceased			Ceased		
			:30	0	4.34	10:13a	0	.0884
			:45	.12	4.37	:22	.0012	.0885
			:55	.06	4.38	:28	.0017	.0886
			10:00	.24	4.40	:40	.0014	.0889
			:15	.20	4.45	:52	.0006	.0891
			:25	.06	4.46	11:04	.0002	.0892
			:32	.17	4.48	:36e	0	.0892
			11:00	.02	4.49			
			:50	.01	4.50			
			12 N	.06	4.51			
			1:00p	.01	4.52			
			2:00e	.01	4.53			
Notes: ^{1/} Intensities from 24 hour raingage chart. ^{2/} To convert in in/hr to cfs multiply by 33.17. ^{3/} Edna Hurricane.								



Freehold, New Jersey

Watershed W-II

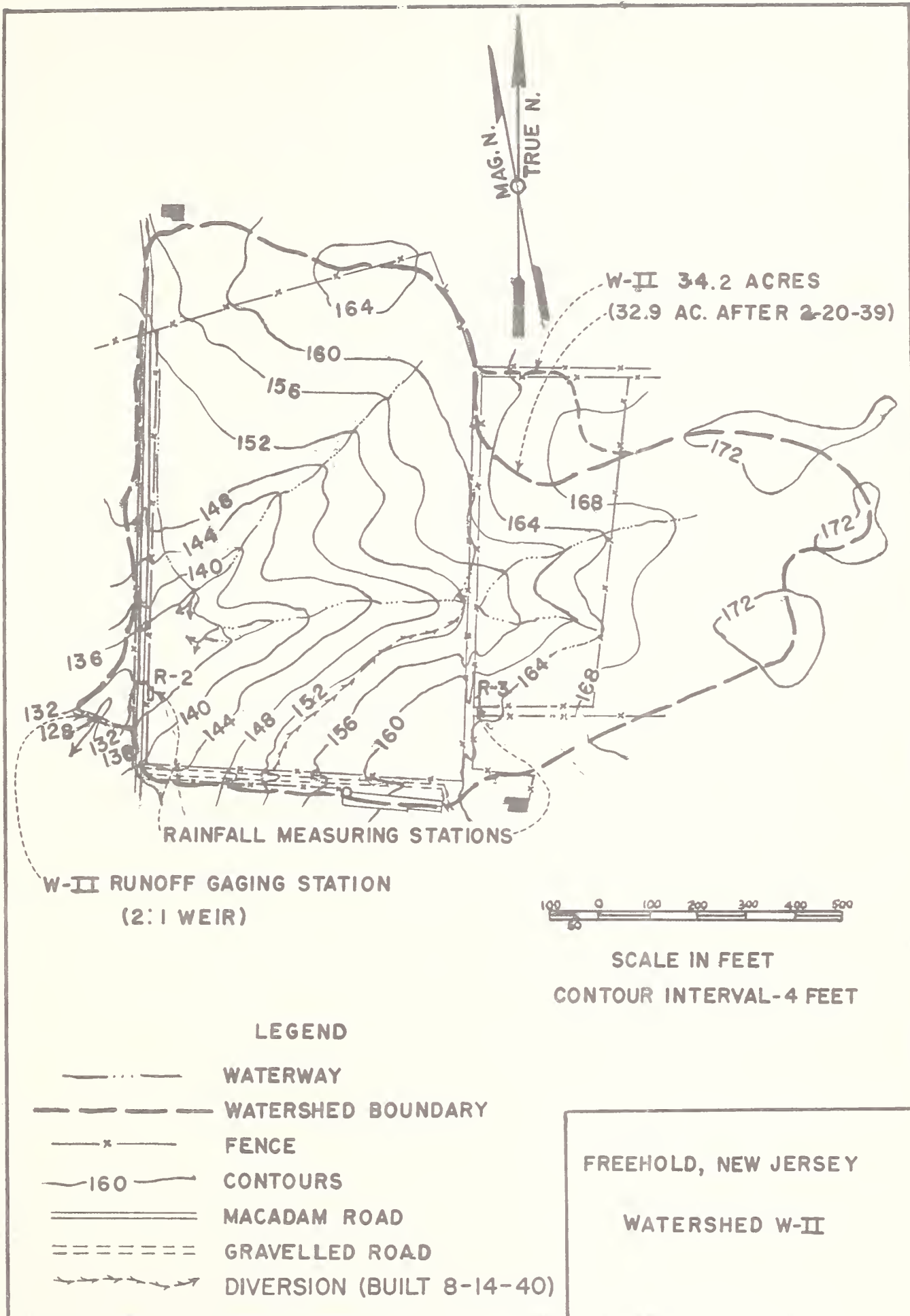
1938-43



Freehold, New Jersey.

Watershed W-II

1950-55



College Park, Maryland			Watershed W-1 (5.1)			8.22 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 10, 1942								
7-11-42	.23	0	8-10-42	Raingage	R-1	8-10-42		
7-19	.52	0	8:20p	0	0	8:30p	0	0
7-20	.26	0	:21	.60	.01	:35	.015	.0003
7-24	.04	0	:25	.30	.03	:36	.039	.0008
7-25	.58	0	:27	2.40	.11	:37	.084	.0018
7-26	.55	0	:28	4.80	.19	:38	.234	.0044
7-27	.15	0	:29	7.80	.32	:39	.321	.0090
7-29	.02	0	:30	4.80	.40	:40	.371	.0148
7-31	.14	0	:31	6.00	.50	:41	.465	.0218
8-3	.04	0	:33	6.30	.71	:42	.597	.0306
8-5	.13	0	:35	4.50	.86	:43	.677	.0412
8-7	.02	0	:36	6.00	.96	:44	.654	.0523
8-8	2.59	.0391	:38	4.80	1.12	:45	.733	.0639
8-9	1.43	.4641	:39	3.00	1.17	:46	.802	.0767
			:41	1.20	1.21	:47	.905	.0909
			:43	.60	1.23	:48	1.20	.1084
			:45	2.40	1.31	:49	1.62	.1319
			:47	.90	1.34	:50	1.67	.1594
			:56	.07	1.35	:51	1.59	.1866
			9:00e	.30	1.37	:52	1.50	.2123
						:53	1.32	.2358
						:54	1.32	.2578
						:56	1.12	.2985
						:59	.946	.3502
						9:02	.776	.3933
						:05	.653	.4291
						:08	.537	.4589
						:11	.449	.4835
						:14	.384	.5043
						:17	.325	.5220
						:20	.292	.5374
						:26	.232	.5636
						:32	.176	.5840
						:38	.139	.5998
						:44	.112	.6124
						:56	.072	.6309
						10:08	.050	.6432
						:20	.032	.6514
						:32	.023	.6569
						:44	.020	.6612
						:56	.016	.6648
						11:08	.012	.6675
						:38	.006	.6719
						12 Mt	.003	.6735
						8-11-42		
						1:00a	.001	.6756
						4:00e	0	.6764
Watershed Conditions: Contour strip cropping on 7 strips, 90 to 100 feet wide with rows within 2% of contour: corn 8 to 10 ft. high with 3-inch ridges in rows 29%; clover and lespedeza 8 to 15 inches high, medium to thick stand 32%; hay (cut July 9 to 16 and removed) 6 inches high medium stand 39%.								

Notes: To convert runoff in in/hr to cfs multiply by 8.29.

College Park, Maryland			Watershed W-1 (5.1)			8.22 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 22 1945								
6-22-45	.01 ^{1/}	.0015 ^{1/}	7-22-45	Raingage	R-1	7-22-45		
7-1	.01	0	1:23p	0	0	1:24p	0	0
7-2	1.11	.0048	:27	.15	.01	:28	.003	.0001
7-5	.78	.0049	:29	3.00	.11	:30	.007	.0003
7-9	.11	0	:31	7.50	.36	:31	.016	.0005
7-10	.82	.0742	:32	9.00	.51	:32	.043	.0010
7-14	1.12	.2242	:35	7.00	.85	:33	.097	.0022
7-15	.58	.0389	:39	4.20	1.13	:34	.255	.0051
7-17	2.55	1.2913	:41	3.00	1.23	:35	.421	.0107
7-18	.79	.5796	:43	8.40	1.51	:36	.490	.0183
7-19	.72	.4361	:44	5.40	1.60	:37	.574	.0272
7-20	.02	.0013	:46	2.70	1.69	:38	.703	.0378
			:51	1.08	1.78	:39	.902	.0512
			2:00	.07	1.79	:40	1.310	.0696
			:07e	.17	1.81	:41	1.700	.0946
<u>Watershed Conditions:</u> Contour strip cropping on 7 strips within 2% of contour: corn 7 to 9 ft. high 29%; clover and lespedeza 6 to 12 inches high, medium to dense stand in wheat stubble 32%; hay mowed July 11 & 12 and not removed because of wet and mouldy condition 39%. Local washing and silting along corn rows and at low places, the 3-inch ridges in corn rows were completely washed out. Soil loss over weir was 1.18 tons or .156 tons per acre. ^{2/}						:42	1.910	.1248
						:43	2.170	.1588
						:44	2.920	.2011
						:45	3.550	.2551
						:46	3.610	.3148
						:47	3.410	.3733
						:48	2.870	.4256
						:49	2.870	.4734
						:51	2.460	.5621
						:53	2.200	.6398
						:56	1.730	.7383
						:59	1.320	.8143
						2:02	1.060	.8738
						:05	.859	.9218
						:08	.693	.9606
						:11	.601	.9930
						:15	.452	1.0281
						:19	.364	1.0553
						:23	.285	1.0770
						:27	.243	1.0946
						:31	.193	1.1091
						:35	.168	1.1211
						:41	.127	1.1358
						:47	.094	1.1468
						:53	.072	1.1551
						:59	.054	1.1614
						3:05	.040	1.1661
						:11	.027	1.1695
						:21	.020	1.1734
						:31	.015	1.1764
						:53	.007	1.1806
						4:13	.004	1.1825
						:33	.002	1.1835
						:53	.001	1.1840
						5:33	.001	1.1847
						7-23-45		
						11:00a(e)	0	1.1866

Notes: 1/ Continuance of June 21-22, 1945 event (Precipitation = 1.92"; runoff = .9164").

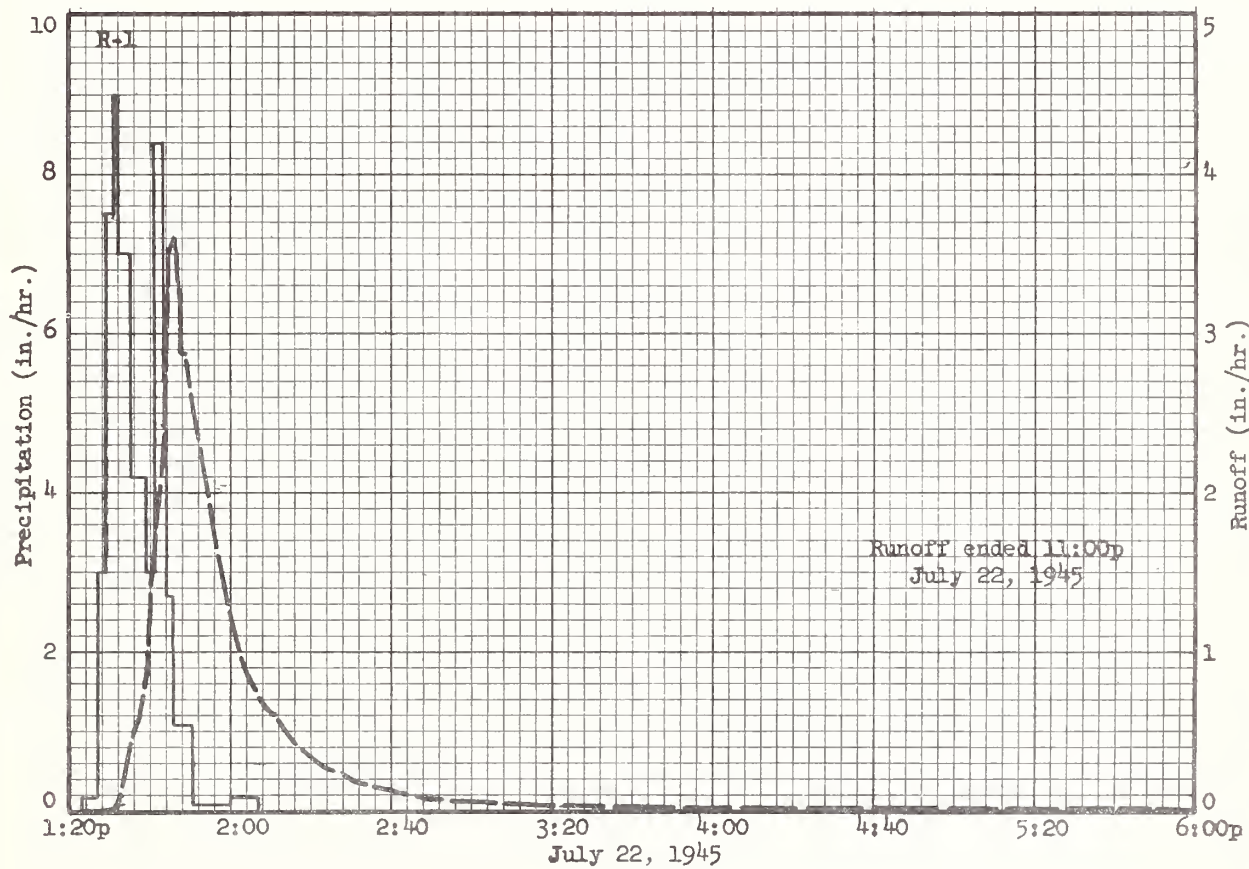
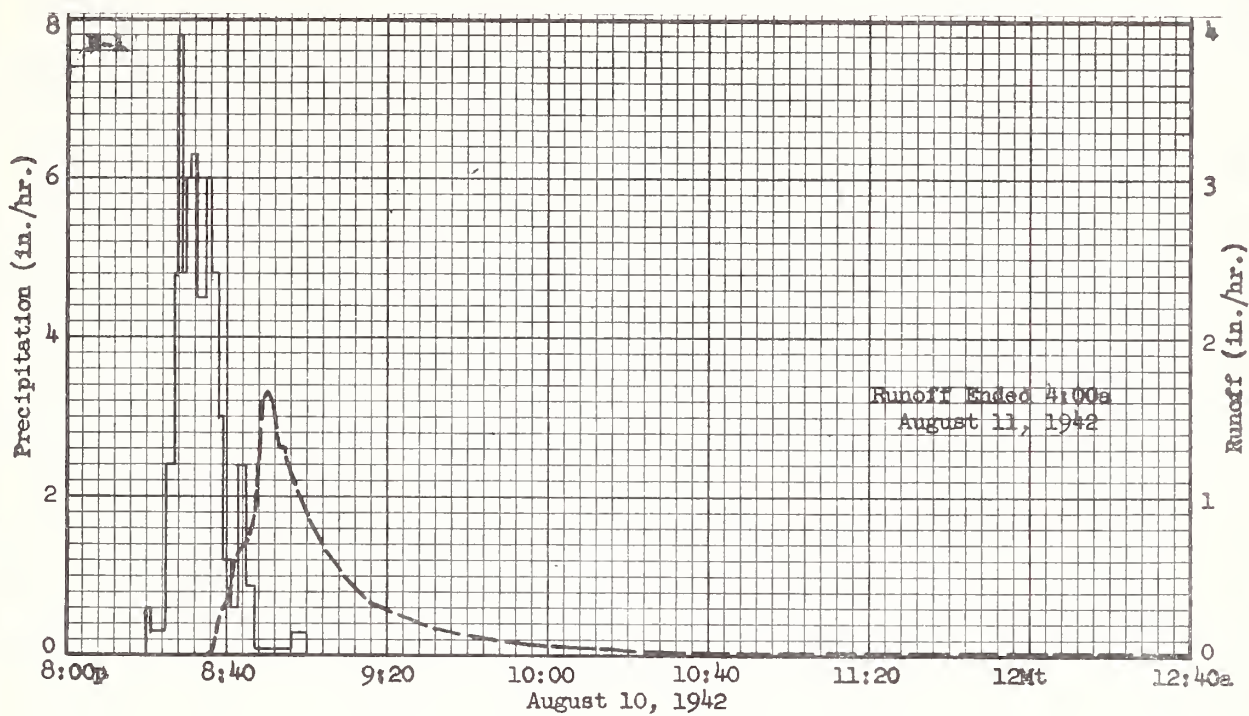
2/ Based on 7 quart samples integrated through flow at notch.

To convert runoff in in/hr to cfs multiply by 8.29.

College Park, Maryland			Watershed W-1 (5.1)			8.22 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 3, 1948								
7-6-48	.04	0	8-3-48	Raingage	R-1	8-3-48		
7-13	.33	0	3:42p	0	0	3:47p	0	0
7-14	.43	0	:44	5.70	.19	:49	.008	.0099
7-17	.13	0	:46	7.80	.45	:50	.037	.0016
7-19	.04	0	:48	9.00	.75	:50½	.047	.0020
7-21	.77	.0573	:50	4.50	.90	:51	.068	.0025
7-23	.61	.3023	:52	5.40	1.08	:51½	.090	.0031
7-27	.32	0	:55	4.20	1.29	:52	.179	.0042
7-30	.17	0	:57	2.70	1.38	:52½	.451	.0068
7-31	.50	0	:59	2.10	1.45	:53	.683	.0115
8-1	2.76	1.2309	4:00	1.20	1.47	:53¼	.802	.0177
			:04	.30	1.49	:54	.734	.0241
			:30e	.02	1.50	:54½	.674	.0300
						:55	1.008	.0370
						:56	2.47	.0670
Watershed Conditions: Tillage up and down the slope in 3 fields; corn 7 to 9 ft. high with 3-inch ridges in middle field 31%; clover and lespedeza 6 to 12 inches high (wheat combined July 9) 30%; hay harvested July 15-20, stubble 5 to 6 inches high medium stand 39%.			6:30	0	1.50	:56½	2.41	.0873
			7:30	.02	1.52	:57	2.58	.1080
			8:00	.04	1.54	:57½	2.68	.1299
			:30e	.02	1.55	:58	2.36	.1509
						:59	2.30	.1897
						4:00	2.26	.2277
						:02	1.97	.2981
						:04	2.04	.3651
						:05	1.97	.3984
						:06	1.79	.4297
						:07	1.70	.4589
						:10	1.42	.5369
						:13	1.15	.6009
						:16	.947	.6533
						:19	.865	.6986
						:22	.726	.7384
						:25	.634	.7724
						:31	.464	.8273
						:37	.347	.8678
						:43	.274	.8989
						:49	.209	.9230
						:55	.164	.9417
						5:01	.133	.9565
						:07	.103	.9683
						:13	.077	.9773
						:19	.063	.9843
						:29	.048	.9935
						:39	.032	1.0002
						:54	.020	1.0067
						6:09	.011	1.0106
						:24	.007	1.0127
						:44	.004	1.0145
						7:14p	.002	1.0162
						:44	.001	1.0169
						9:27e	0	1.0172

Notes: To convert runoff in in/hr to cfs multiply by 8.29.

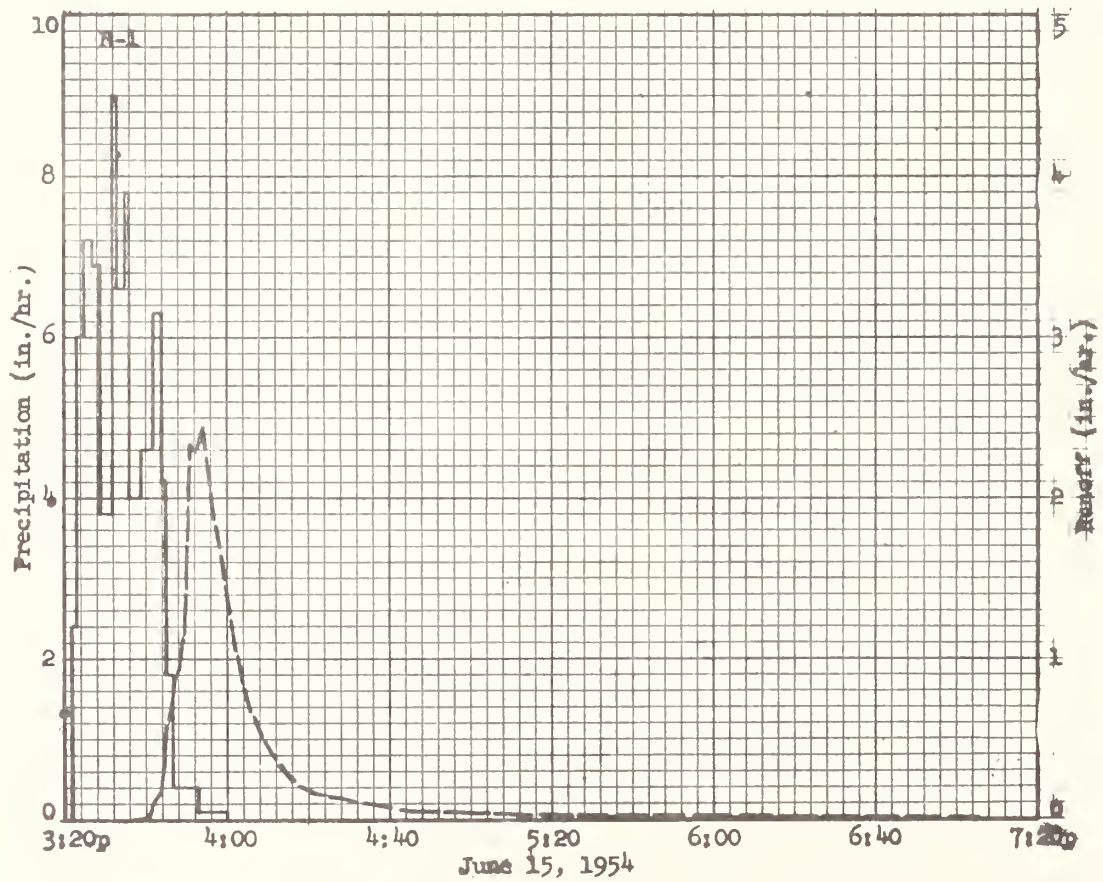
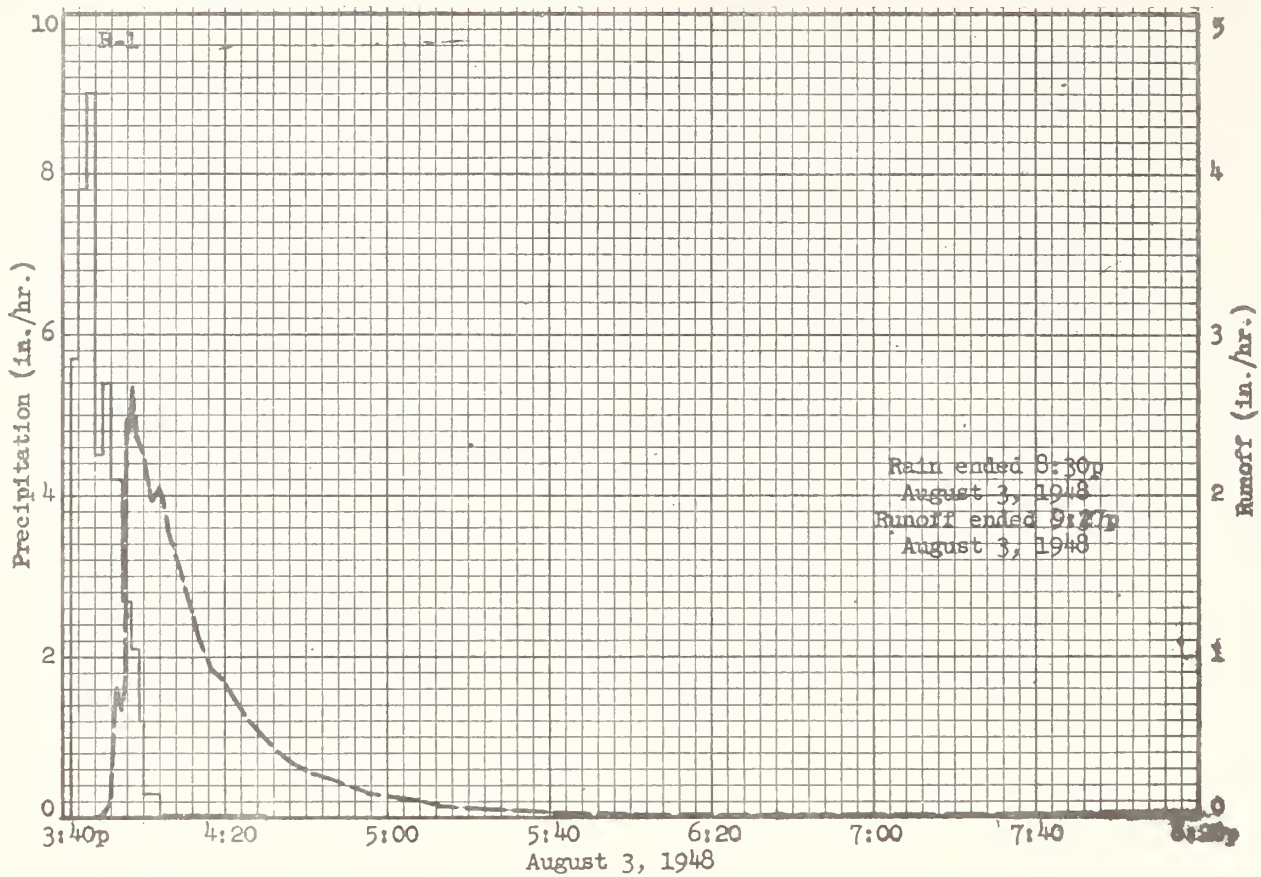
College Park, Maryland			Watershed W-1			(5.1)			8.22 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of June 15, 1954											
5-18-54	.03	0	6-15-54	Raingage	R-1	6-15-54					
5-19	.12	0	3:22p	0	0	3:37p	0	0			
5-20	.47	0	:23	2.40	.04	:38	.004	.0001			
5-25	.01	0	:25	6.00	.24	:39	.008	.0002			
5-29	.24	0	:27	7.20	.48	:40	.014	.0004			
6-4	.04	0	:29	6.90	.71	:41	.015	.0006			
6-10	.35	0	:32	3.80	.90	:42	.113	.0017			
6-11	.02	0	:33	9.00	1.05	:43	.163	.0040			
6-13	.03	0	:35	6.60	1.27	:44	.215	.0072			
			:36	7.80	1.40	:45	.591	.0139			
Watershed Conditions: Contour strip cropping on 7 strips within 2% of the contour: corn 2 to 4 inches high 29%; wheat 36" high was laid flat by storm on 85% of area comprising 32% of watershed area; clover and hay harvested June 7 leaving stubble 4 inches high 39%. Considerable rilling and sheet erosion on corn strips.			:39	4.00	1.60	:46	.630	.0241			
			:42	4.60	1.83	:47	.869	.0366			
			:44	6.30	2.04	:48	.935	.0516			
			:45	4.20	2.11	:49	1.150	.0690			
			:47	1.80	2.17	:50	1.624	.0921			
			:53	.40	2.21	:51	2.335	.1251			
			4:00e	.09	2.22	:52	2.300	.1637			
						:53	2.388	.2028			
						:54	2.450	.2431			
						:56	2.050	.3181			
						4:00	1.378	.4324			
						:04	.805	.5052			
						:08	.545	.5502			
						:12	.339	.5797			
						:16	.238	.5989			
						:20	.194	.6133			
						:24	.151	.6248			
						:28	.133	.6342			
						:34	.100	.6458			
						:40	.073	.6545			
						:46	.055	.6609			
						:52	.041	.6657			
						:58	.033	.6694			
						5:04	.027	.6724			
						:10	.020	.6748			
						:20	.015	.6777			
						:30	.009	.6797			
						:40	.006	.6810			
						:55	.004	.6822			
						6:10	.002	.6829			
						:30	.001	.6833			
						7:05e	0	.6836			
Notes: To convert runoff in in/hr to cfs multiply by 8.29.											



College Park, Maryland

Watershed W-1

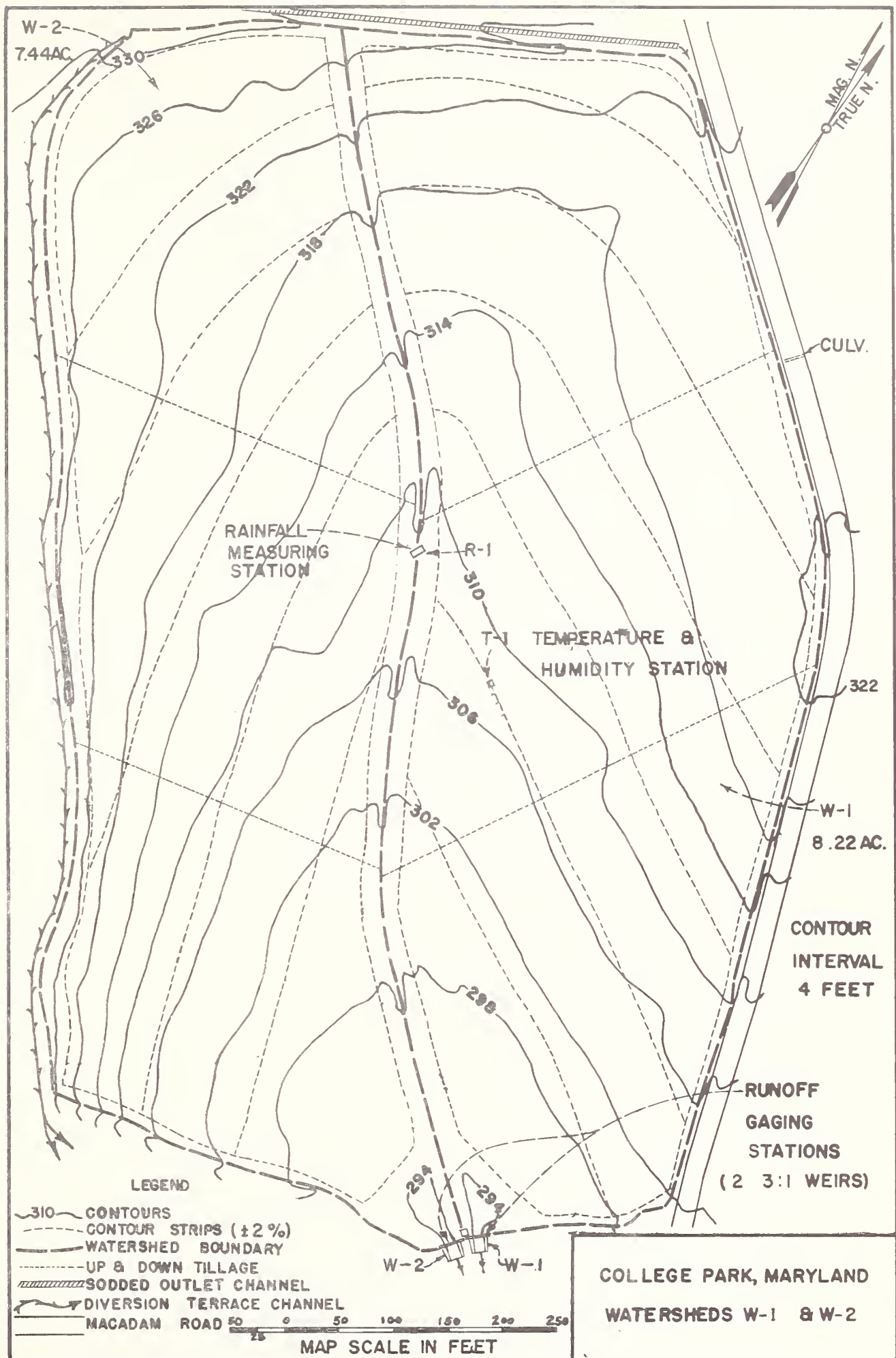
1942-45



College Park, Maryland

Watershed W-1

1948-54



College Park,,Maryland			Watershed W-2			(5.2)		7.44 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of August 10, 1942									
7-11-42	.23	0	8-10-42	Raingage	R-1	8-10-42			
7-19	.52	0	8:20p	0	0	8:33p	0	0	
7-20	.26	0	:21	.60	.01	:37½	.072	.0004	
7-24	.04	0	:25	.30	.03	:38	.141	.0013	
7-25	.58	0	:27	2.40	.11	:38½	.189	.0027	
7-26	.55	0	:28	4.80	.19	:39	.160	.0042	
7-27	.15	0	:29	7.80	.32	:40	.136	.0067	
7-29	.02	0	:30	4.80	.40	:41	.083	.0085	
7-31	.14	0	:31	6.00	.50	:42	.079	.0099	
8-3	.04	0	:33	6.30	.71	:43	.101	.0114	
8-5	.13	0	:35	4.50	.86	:44	.132	.0133	
8-7	.02	0	:36	6.00	.96	:45	.183	.0159	
8-8	2.59	.0036	:38	4.80	1.12	:46	.238	.0194	
8-9	1.43	.0537	:39	3.00	1.17	:47	.252	.0235	
			:41	1.20	1.21	:48	.315	.0282	
Watershed Conditions: Contour strip cropping on 6 strips 90 to 100 ft. wide within 2% of contour: corn 9 to 11 ft. high with 3-inch ridges in rows 30%; clover and lespedeza 10 to 18 inches high (following combining of wheat July 6) medium to thick stand 26%; hay (cut and removed July 9 to 16) 8 inches high, medium stand 44%.			:43	.60	1.23	:49	.419	.0343	
			:45	2.40	1.31	:50	.478	.0418	
			:47	.90	1.34	:51	.486	.0498	
			:56	.07	1.35	:52	.495	.0580	
			9:00e	.30	1.37	:53	.473	.0661	
						:54	.472	.0740	
						:56	.368	.0880	
						:58	.368	.1003	
						9:02	.325	.1233	
						:06	.325	.1449	
						:10	.288	.1653	
						:12	.250	.1743	
						:14	.219	.1821	
						:18	.190	.1958	
						:22	.156	.2073	
						:26	.143	.2172	
						:30	.112	.2257	
						:36	.077	.2352	
						:42	.057	.2419	
						:48	.042	.2469	
						:54	.032	.2506	
						10:00	.021	.2533	
						:06	.018	.2553	
						:18	.014	.2586	
						:30	.007	.2608	
						:42	.005	.2620	
						:54	.005	.2630	
						11:06	.004	.2639	
						:30	.001	.2649	
						12 Mt	.001	.2652	
						8-11-42			
						12:30a(e)	0	.2653	

Notes: To convert runoff in in/hr to cfs multiply by 7.50.
For map of area, see Sheet 7 of 7 for W-1, (5.1) College Park, Maryland.

Notes: To convert runoff in in/hr to cfs multiply by 7.50.
For map of area, see Sheet 7 of 7 for W-1, (5.1) College Park, Maryland.

College Park, Maryland			Watershed W-2			(5.2)		7.44 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of July 22, 1945									
6-22-45	.01 ^{1/}	.0003 ^{1/}	7-22-45	Raingage	R-1	7-22-45			
7-1	.01	0	1:23p	0	0	1:23p	0	0	
7-2	1.11	.0194	:27	.15	.01	:26	.011	.0003	
7-5	.78	.0283	:29	3.00	.11	:29	.031	.0014	
7-9	.11	0	:31	7.50	.36	:31	.077	.0032	
7-10	.82	.1533	:32	9.00	.51	:32	.157	.0051	
7-14	1.12	.2831	:35	7.00	.85	:33	.235	.0084	
7-15	.58	.0260	:39	4.20	1.13	:34	.228	.0123	
7-17	2.55	.9813	:41	3.00	1.23	:35	.224	.0161	
7-18	.79	.2587	:43	8.40	1.51	:36	.286	.0204	
7-19	.72	.1854	:44	5.40	1.60	:37	.875	.0301	
7-20	.02	.0003	:46	2.70	1.69	:37 ^{1/2}	1.91	.0417	
			:51	1.08	1.78	:38	2.21	.0589	
			2:00	.07	1.79	:38 ^{1/2}	2.20	.0772	
			:07e	.17	1.81	:39	2.11	.0951	
Watershed Conditions: Tillage up and down the slope in 3 fields: corn 7 to 9 ft. high with 3-inch ridges in middle field (about 5% of corn plants washed out June 7) 30%; clover and lespedeza 6 to 12 inches high, medium to thick stand 28%; hay (mowed July 16 not removed because of wet and mouldy condition 42%. There was severe washing in every row in corn field with heavy deposition of silt and sand in channel along dividing dike and moderate silting in grass channel below wheat stubble. In addition, 4.2 tons ^{2/} of silt was lost in flow over the weir, or .726 tons per acre.						:40	2.21	.1311	
						:41	2.40	.1696	
						:42	2.31	.2079	
						:43	2.36	.2469	
						:44	2.39	.2864	
						:46	2.47	.3674	
						:48	2.36	.4481	
						:50	2.07	.5218	
						:52	1.73	.5851	
						:54	1.48	.6388	
						:56	1.24	.6841	
						:58	1.05	.7221	
						2:01	.863	.7700	
						:04	.685	.8087	
						:08	.545	.8497	
						:12	.453	.8830	
						:16	.341	.9095	
						:20	.272	.9300	
						:26	.191	.9531	
						:32	.141	.9697	
:38	.098	.9817							
:44	.070	.9901							
:50	.049	.9961							
:56	.026	.9998							
3:02	.018	1.0020							
:12	.010	1.0043							
:22	.004	1.0054							
:32	.004	1.0060							
:42	.003	1.0065							
:52	.001	1.0068							
4:00e	0	1.0068							

Notes: 1/ Continuance of June 21-22, 1945 event (Precipitation = 1.92"; runoff = .7709").
2/ Based on 7 quart samples integrated through depth at notch.
To convert runoff in in/hr to cfs multiply by 7.50.

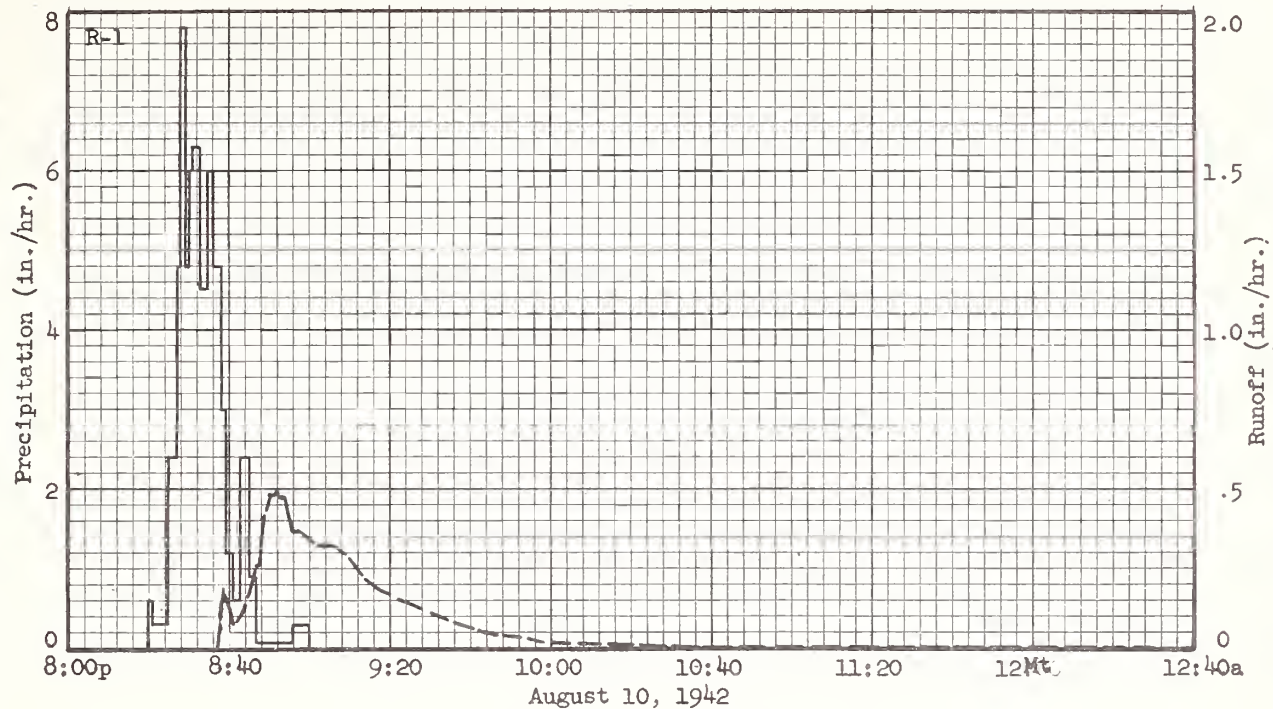
Notes: 1/ Continuance of June 21-22, 1945 event (Precipitation = 1.92"; runoff = .7709").
2/ Based on 7 quart samples integrated through depth at notch.
To convert runoff in in/hr to cfs multiply by 7.50.

College Park, Maryland			Watershed W-2			(5.2)		7.44 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of August 3, 1948									
7-6-48	.04	0	8-3-48	Raingage	R-1	8-3-48			
7-13	.33	0	3:42p	0	0	3:49p	0	.0001	
7-14	.43	0	:44	5.70	.19	:50	.005	.0001	
7-17	.13	0	:46	7.80	.45	:50½	.013	.0002	
7-19	.04	0	:48	9.00	.75	:51	.029	.0004	
7-21	.77	0	:50	4.50	.90	:51½	.053	.0007	
7-23	.61	0	:52	5.40	1.08	:52	.067	.0012	
7-27	.32	0	:55	4.20	1.29	:52½	.099	.0019	
7-30	.17	0	:57	2.70	1.38	:53	.147	.0029	
7-31	.50	0	:59	2.10	1.45	:53½	.222	.0044	
8-1	2.76	.3979	4:00	1.20	1.47	:54	.334	.0067	
			:04	.30	1.49	:54½	.390	.0097	
			:30e	.02	1.50	:55	.303	.0126	
						:56	.271	.0174	
Watershed Conditions: Contour strip cropping on 6 strips 90 to 100 ft. wide within 2% of contour: corn 8 to 10 ft. high with 3-inch ridges in rows 30%; clover and lespedeza 7 to 14 inches high (wheat combined July 9) 26%; hay harvested July 15-20 leaving stubble 4 inches high with medium stand 44%.			6:30	0	1.50	:57	.470	.0236	
			7:30	.02	1.52	:57½	.850	.0291	
			8:00	.04	1.54	:58	1.140	.0374	
			:30e	.02	1.55	:58½	1.040	.0465	
						:59	.890	.0545	
						:59½	1.000	.0622	
						4:00	.960	.0704	
						:01	1.060	.0872	
						:02	1.240	.1064	
						:03	1.160	.1264	
						:04	1.120	.1454	
						:06	1.060	.1818	
						:08	1.000	.2161	
						:09	1.000	.2328	
						:12	.860	.2793	
						:15	.770	.3198	
						:18	.770	.3582	
						:22	.730	.4082	
						:26	.630	.4535	
						:30	.550	.4928	
						:34	.421	.5252	
						:38	.356	.5510	
						:44	.268	.5822	
						:50	.201	.6057	
						:56	.139	.6225	
						5:02	.112	.6349	
						:08	.075	.6443	
						:14	.047	.6504	
						:20	.028	.6541	
						:30	.019	.6581	
						:45	.003	.6608	
						6:00	.005	.6618	
						:15	.002	.6626	
						:30	.002	.6630	
						:56e	0	.6634	
Notes: To convert runoff in in/hr to cfs multiply by 7.50. For map of area, see Sheet 7 of 7 for W-1, (5.1) College Park, Maryland.									

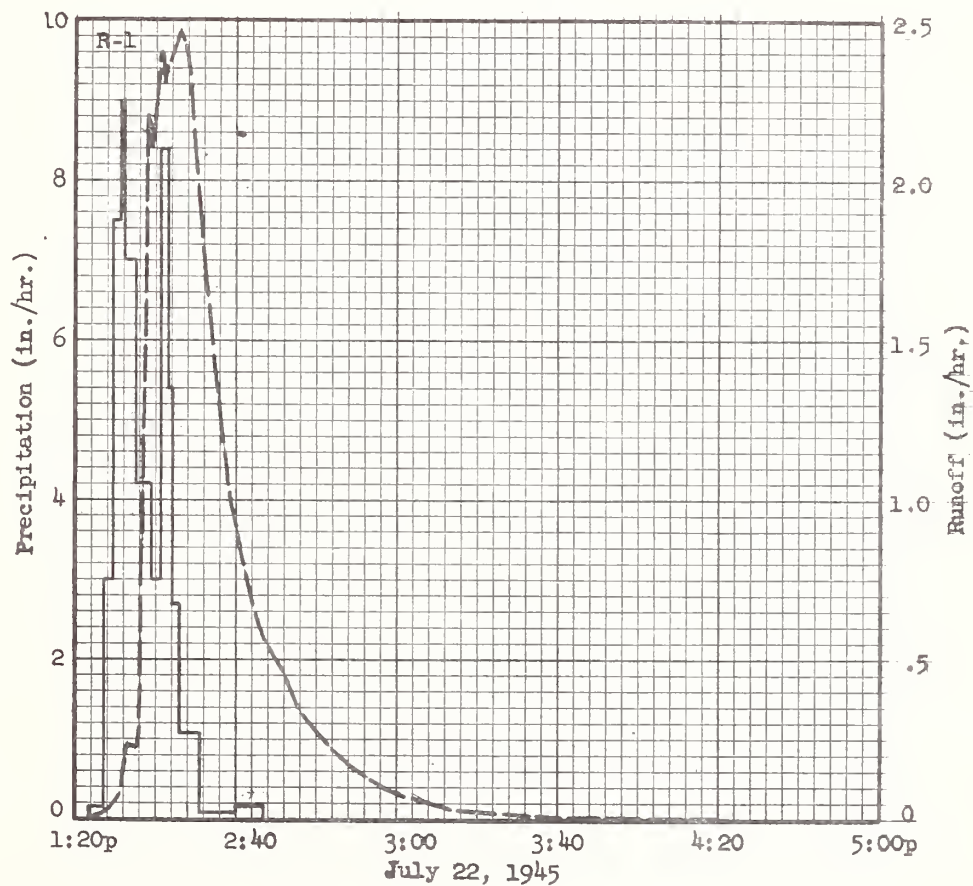
Notes: To convert runoff in in/hr to cfs multiply by 7.50.
For map of area, see Sheet 7 of 7 for W-1, (5.1) College Park, Maryland.

College Park, Maryland			Watershed W-2			(5.2)		7.44 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of June 15, 1954									
5-18-54	.03	0	6-15-54	Raingage	R-1	6-15-54			
5-19	.12	0	3:22p	0	0	3:37p	0	0	
5-20	.47	0	:23	2.40	.04	:39	.057	.0007	
5-25	.01	0	:25	6.00	.24	:40	.040	.0015	
5-29	.24	0	:27	7.20	.48	:41	.059	.0023	
6-4	.04	0	:29	6.90	.71	:42	.136	.0039	
6-10	.35	0	:32	3.80	.90	:43	.182	.0066	
6-11	.02	0	:33	9.00	1.05	:44	.231	.0100	
6-13	.03	0	:35	6.60	1.27	:45	.568	.0167	
			:36	7.80	1.40	:46	.968	.0295	
Watershed Conditions: Contour strip cropping on 6 strips 90 to 100 ft. wide within 2% of the contour: corn 2 to 4 inches high 30%; 85% of the wheat which had stood 36 inches high was laid flat by storm 26%; clover and hay harvested June 7 leaving 4-inch stubble 44%. Considerable rilling and sheet erosion occurred on corn strips.			:39	4.00	1.60	:47	.747	.0438	
			:42	4.60	1.83	:48	.783	.0565	
			:44	6.30	2.04	:49	.761	.0694	
			:45	4.20	2.11	:50	.898	.0832	
			:47	1.80	2.17	:51	1.240	.1010	
			:53	.40	2.21	:52	1.298	.1222	
			4:00e	.09	2.22	:53	1.218	.1432	
						:54	1.137	.1628	
						:55	1.002	.1806	
						:56	1.002	.1973	
						:59	.669	.2391	
						4:02	.447	.2670	
						:05	.325	.2863	
						:08	.231	.3002	
						:11	.181	.3105	
						:14	.131	.3183	
						:17	.123	.3246	
						:20	.124	.3308	
						:25	.083	.3394	
						:30	.065	.3456	
						:40	.037	.3541	
						:50	.026	.3594	
						5:00	.020	.3633	
						:15	.010	.3670	
						:30	.007	.3691	
						:45	.003	.3703	
						6:00	.001	.3708	
						:20	.001	.3711	
						:29e	0	.3712	

Notes: To convert runoff in in/hr to cfs multiply by 7.50.
For map of area, see Sheet 7 of 7 for W-1, (5.1) College Park, Maryland.



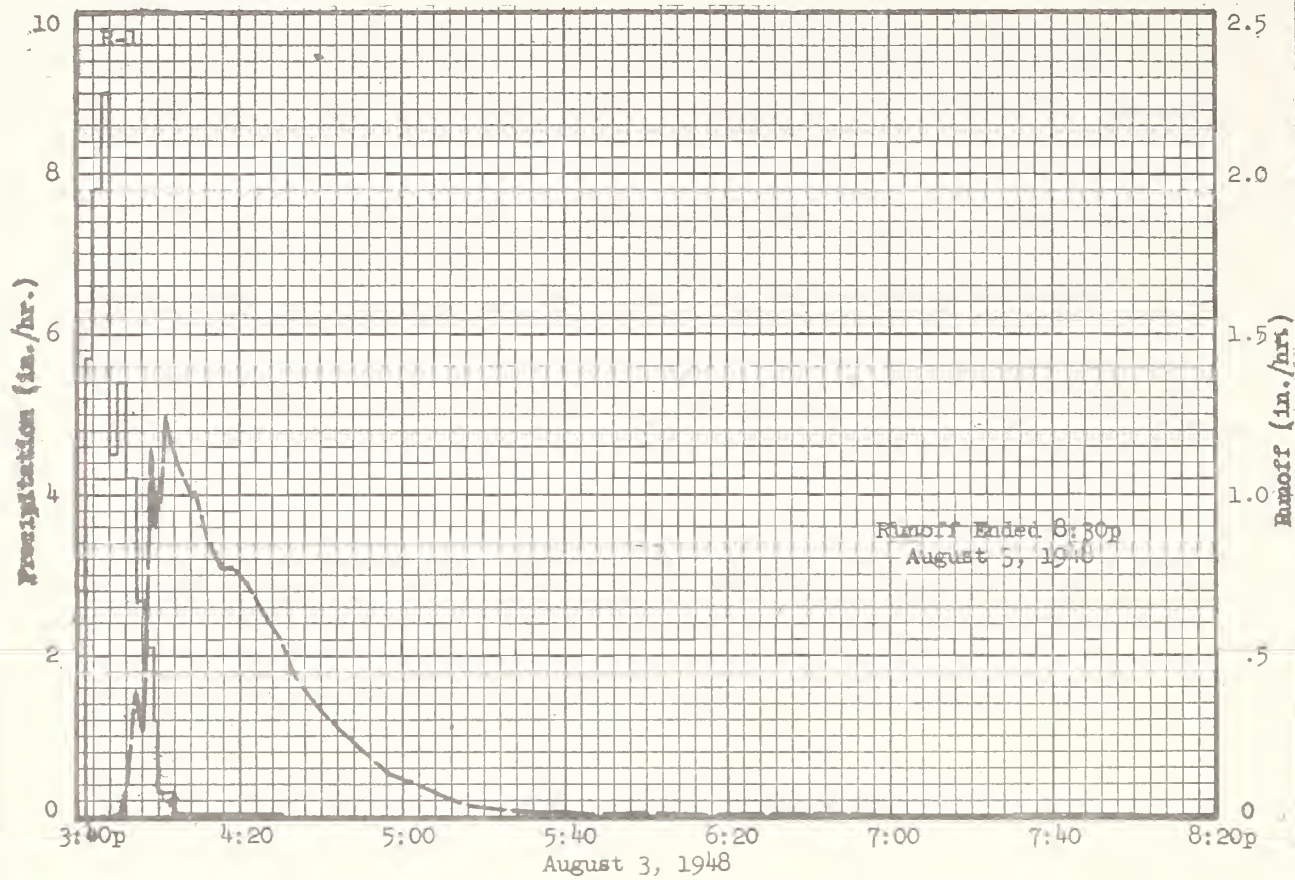
For map of area see Sheet 7
of 7 for (5.1) Watershed W-1
at College Park, Maryland.



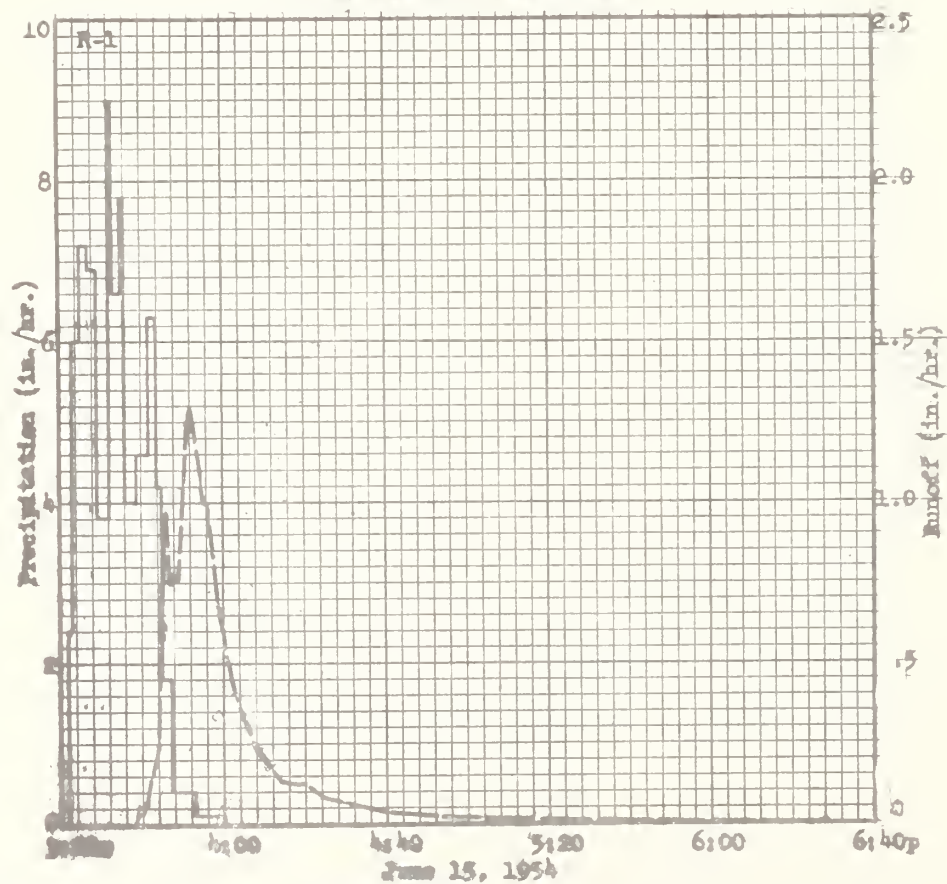
College Park, Maryland

Watershed W-2

1942-45



For map of area see Sheet 7
of 7 for (5.1) Watershed W-1
at College Park, Maryland.



College Park, Maryland

Watershed W-2

1948-54

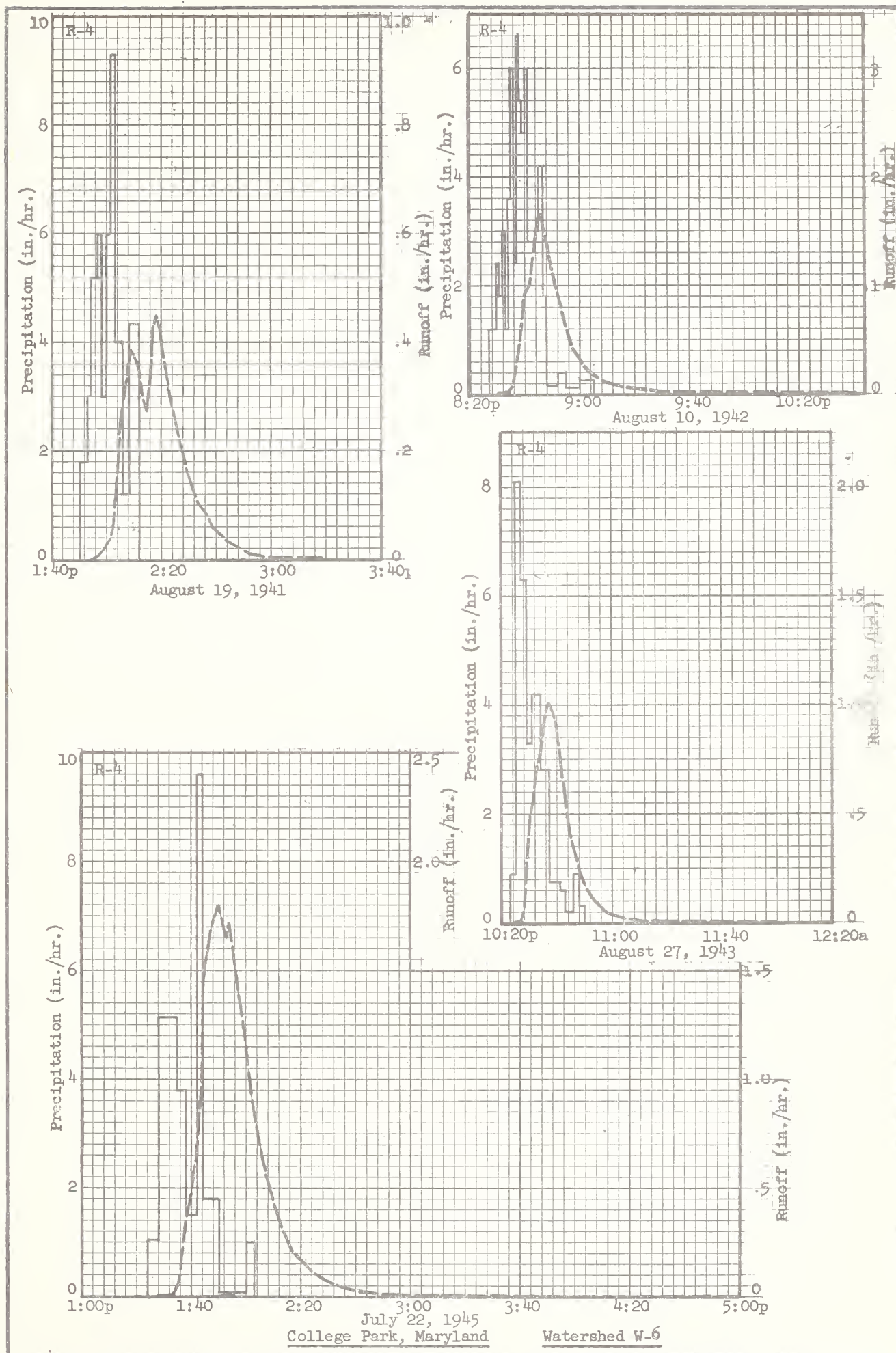
College Park, Maryland			Watershed W-6 (5.6)			3.53 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 19, 1941								
7-29-41	.40	.0005	8-19-41	Raingage	R-4	8-19-41		
7-30	.83	.0114	1:50p	0	0	1:54p	0	0
8-5	.21	0	:53	1.80	.09	:56	.003	.0001
8-9	.27	0	:54	3.00	.14	:57	.007	.0002
8-12	.37	0	:57	5.20	.40	:58	.015	.0004
8-15	1.44	.0158	:58	6.00	.50	:59	.024	.0007
8-19	.13 ^{1/}	0	2:00	3.00	.60	2:01	.038	.0017
Watershed Conditions: Bluegrass and white clover pasture with heavy continuous grazing, common fertilization and occasional mowing for weed and excess grass growth control.			:01	6.00	.70	:02	.066	.0026
			:03	9.30	1.01	:03	.130	.0042
			:06	4.00	1.21	:04	.203	.0070
			:08	1.20	1.25	:05	.259	.0109
			:12e	4.35	1.54	:06	.286	.0154
						:07	.334	.0206
						:08	.385	.0266
						:09	.385	.0330
						:11	.354	.0453
						:12	.234	.0510
						:13	.303	.0563
						:14	.277	.0611
						:15	.315	.0660
						:16	.323	.0713
						:17	.430	.0776
						:18	.452	.0850
						:19	.419	.0923
						:21	.343	.1056
						:23	.295	.1156
						:25	.251	.1247
						:27	.204	.1323
						:29	.161	.1384
						:31	.130	.1432
						:33	.103	.1471
						:36	.083	.1517
						:39	.058	.1552
						:42	.044	.1578
						:45	.032	.1596
						:48	.022	.1609
						:51	.015	.1618
						:54	.010	.1624
						:57	.005	.1628
						3:00	.003	.1630
						:03	.002	.1631
						:06	.001	.1632
						:18e	0	.1633
Notes: 1/ 12:30a to 7:00a. To convert runoff in in/hr to cfs multiply by 3.56.								

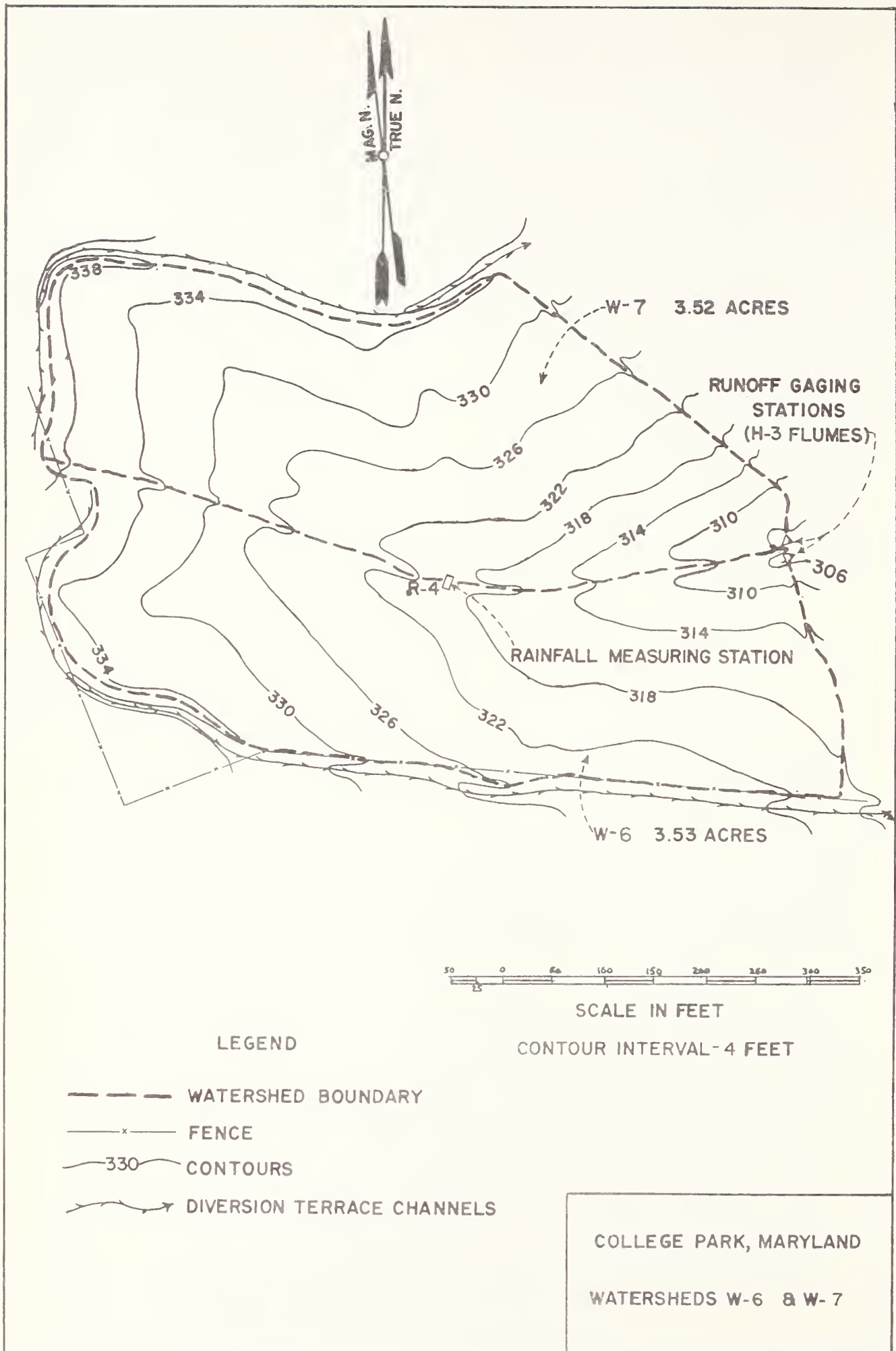
College Park, Maryland			Watershed W-6 (5.6)			3.53 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
<u>Event of August 10, 1942</u>								
7-11-42	.25	.0123	8-10-42	Raingage	R-4	8-10-42		
7-19	.28	0	8:27p	0	0	8:30p	0	0
7-20	.31	0	:30	1.20	.06	:31	.002	0
7-24	.06	0	:31	2.40	.10	:32	.005	.0001
7-25	.58	0	:32	1.80	.13	:33	.011	.0002
7-26	.55	.0019	:33	3.00	.18	:34	.032	.0006
7-27	.08	0	:34	1.20	.20	:35	.062	.0014
7-29	.02	0	:35	3.60	.26	:36	.148	.0031
8-3	.05	0	:36	6.00	.36	:37	.234	.0063
8-5	.13	0	:37	2.40	.40	:38	.441	.0119
8-7	.01	0	:38	6.60	.51	:39	.663	.0211
8-8	2.57	.2412	:39	5.40	.60	:40	.871	.0339
8-9	1.50	.1519	:40	4.80	.68	:41	.978	.0493
			:41	6.00	.78	:42	1.014	.0659
			:44	2.80	.92	:43	1.26	.0849
Watershed Conditions: Bluegrass and white clover pasture with heavy continuous grazing, common fertilization and occasional mowing for weed and grass growth control. Herbage yield determined at 5 4ft. x 4ft. pasture cages 18 inches high for 92 days ending Sept. 2 was .71 tons per acre, hay equivalent at 10% moisture.			:45	3.00	.97	:44	1.48	.1077
			:47	4.20	1.11	:45	1.65	.1339
			:48	1.80	1.14	:46	1.65	.1614
			:52	.15	1.15	:47	1.55	.1881
			:55	.40	1.17	:48	1.43	.2129
			9:00	.12	1.18	:49	1.32	.2357
			:05e	.24	1.20	:50	1.15	.2564
						:51	1.014	.2744
						:52	.904	.2904
						:53	.820	.3048
						:55	.621	.3288
						:57	.463	.3469
						:59	.374	.3609
						9:00	.315	.3666
						:01	.287	.3716
						:03	.218	.3800
						:06	.154	.3893
						:10	.103	.3978
						:16	.062	.4060
						:22	.038	.4110
						:28	.024	.4141
						:40	.011	.4176
						:52	.004	.4191
						10:04	.001	.4196
						:16	.001	.4198
						:41e	0	.4199

Notes: To convert runoff in in/hr to cfs multiply by 3.56.

College Park, Maryland			Watershed W-6 (5.6)			3.53 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 27, 1943								
8-10-43	.05	0	8-27-43	Raingage	R-4	8-27-43		
8-13	.01	0	10:23p	0	0	10:24p	0	0
8-16	.39	0	:25	.90	.03	:27	.004	.0001
8-26	.11	0	:27	8.10	.30	:27½	.044	.0003
			:29	6.30	.51	:28	.098	.0009
Watershed Conditions: Bluegrass and white clover pasture with heavy continuous grazing, common fertilization and occasional mowing for weed and excess grass growth control. (No pasture yields taken.)			:31	3.30	.62	:28½	.210	.0022
			:34	4.20	.83	:29	.276	.0042
			:37	2.80	.97	:29½	.396	.0070
			:41	.75	1.02	:30	.489	.0107
			:43	.60	1.04	:31	.551	.0194
			:46	.20	1.05	:32	.678	.0296
			:48	.90	1.08	:34	.771	.0538
			:50e	.30	1.09	:35	.906	.0678
						:36	.979	.0835
						:37	1.01	.1001
						:39	.942	.1327
						:40	.872	.1478
						:41	.787	.1616
						:42	.663	.1737
						:43	.551	.1838
						:44	.452	.1922
						:45	.396	.1993
						:46	.343	.2055
						:47	.295	.2108
						:48	.242	.2153
						:49	.203	.2190
						:51	.155	.2250
						:53	.108	.2294
						:55	.079	.2325
						:57	.055	.2347
						11:00	.038	.2370
						:03	.024	.2385
						:06	.015	.2395
						:09	.010	.2401
						:12	.007	.2405
						:15	.004	.2408
						:21	.002	.2411
						:27	.001	.2412
						12 Mte	0	.2414
Event of July 22, 1945								
6-22-45	.03	.0002	7-22-45	Raingage	R-4	7-22-45		
7-1	.01	0	1:24p	0	0	1:28p	0	0
7-2	1.10	.0487	:28	1.05	.07	:31	.001	0
7-5	.84	.0118	:35	5.14	.67	:32	.005	.0001
7-9	.10	0	:38	3.80	.86	:33	.026	.0004
7-10	.82	.0839	:42	1.50	.96	:34	.055	.0011
7-14	1.11	.1296	:44	9.60	1.28	:36	.098	.0036
7-15	.59	.0027	:50	1.80	1.46	:37	.226	.0063
7-17	2.45	1.0166	2:00	.06	1.47	:38	.343	.0111
7-18	.79	.0544	:03e	1.00	1.52	:39	.419	.0175
Notes: To convert runoff in in/hr to cfs multiply by 3.56.								

College Park, Maryland			Watershed W-6			(5.6)			3.53 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of July 22, 1945 Cont'd.											
7-19-45	.68	.0391				1:40p	.475	.0250			
7-20	.02	0				:41	.565	.0337			
Watershed Conditions: Bluegrass and white clover pasture with heavy continuous grazing, common fertilization and occasional mowing for weed and excess grass growth control. Herbage yield under 5 pasture cages 4 ft. x 4 ft. 18 inches high located in representative areas for period ending July 31, 1945 was 1.22 tons per acre, hay equivalent at 10% moisture.						:42	.649	.0448			
						:43	.820	.0570			
						:43½	.958	.0644			
						:44	1.170	.0733			
						:45	1.430	.0940			
						:46	1.580	.1192			
						:48	1.720	.1742			
						:50	1.800	.2329			
						:52	1.700	.2912			
						:53	1.650	.3190			
						:54	1.720	.3472			
						:56	1.580	.4022			
						:58	1.340	.4509			
						2:00	1.130	.4919			
						:02	.941	.5264			
						:04	.787	.5552			
						:06	.649	.5791			
						:08	.525	.5987			
						:11	.396	.6217			
						:14	.287	.6388			
						:17	.210	.6512			
						:20	.167	.6607			
						:24	.113	.6700			
						:28	.079	.6764			
						:32	.058	.6810			
						:36	.044	.6844			
						:40	.032	.6869			
						:44	.024	.6888			
:48	.017	.6902									
:54	.011	.6916									
3:00	.005	.6924									
:10	.002	.6930									
:20	.001	.6932									
5:00e	0	.6936									
Notes: To convert runoff in in/hr to cfs multiply by 3.56.											





College Park, Maryland			Watershed W-7 (5.7)			4.11 acres ^{1/}		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 19, 1941								
7-29-41	.40	.0002	8-19-41	Raingage	R-4	8-19-41		
7-30	.83	.0173	1:50p	0	0	1:53p	0	0
8-5	.21	0	:53	1.80	.09	:58	.005	0
8-9	.27	0	:54	3.00	.14	:59	.030	.0003
8-12	.37	0	:57	5.20	.40	2:00	.053	.0010
8-15	1.44	.0187	:58	6.00	.50	:01	.064	.0020
8-19	.13 ^{2/}	0	2:00	3.00	.60	:02	.097	.0033
<u>Watershed Conditions:</u> Bluegrass and white clover pasture with heavy continuous grazing, common fertilization and occasional mowing for weed and excess grass growth control.			:01	6.00	.70	:03	.201	.0058
			:03	9.30	1.01	:04	.321	.0101
			:06	4.00	1.21	:05	.420	.0163
			:08	1.20	1.25	:06	.498	.0240
			:12e	4.35	1.54	:07	.498	.0323
						:09	.408	.0474
						:10	.389	.0540
						:11	.398	.0605
						:12	.408	.0672
						:13	.452	.0744
						:14	.486	.0822
						:15	.452	.0900
						:16	.795	.1004
						:17	.795	.1136
						:18	.750	.1261
						:20	.582	.1475
						:22	.473	.1651
						:24	.389	.1795
						:26	.321	.1913
						:28	.261	.2010
						:30	.216	.2089
						:32	.175	.2154
						:34	.144	.2207
						:36	.112	.2250
						:38	.093	.2284
						:41	.064	.2323
						:44	.047	.2350
						:47	.032	.2370
						:50	.021	.2383
						:53	.013	.2391
						:56	.008	.2396
						:59	.005	.2399
						3:02	.002	.2401
						:05	.001	.2402
						:14e	0	.2402

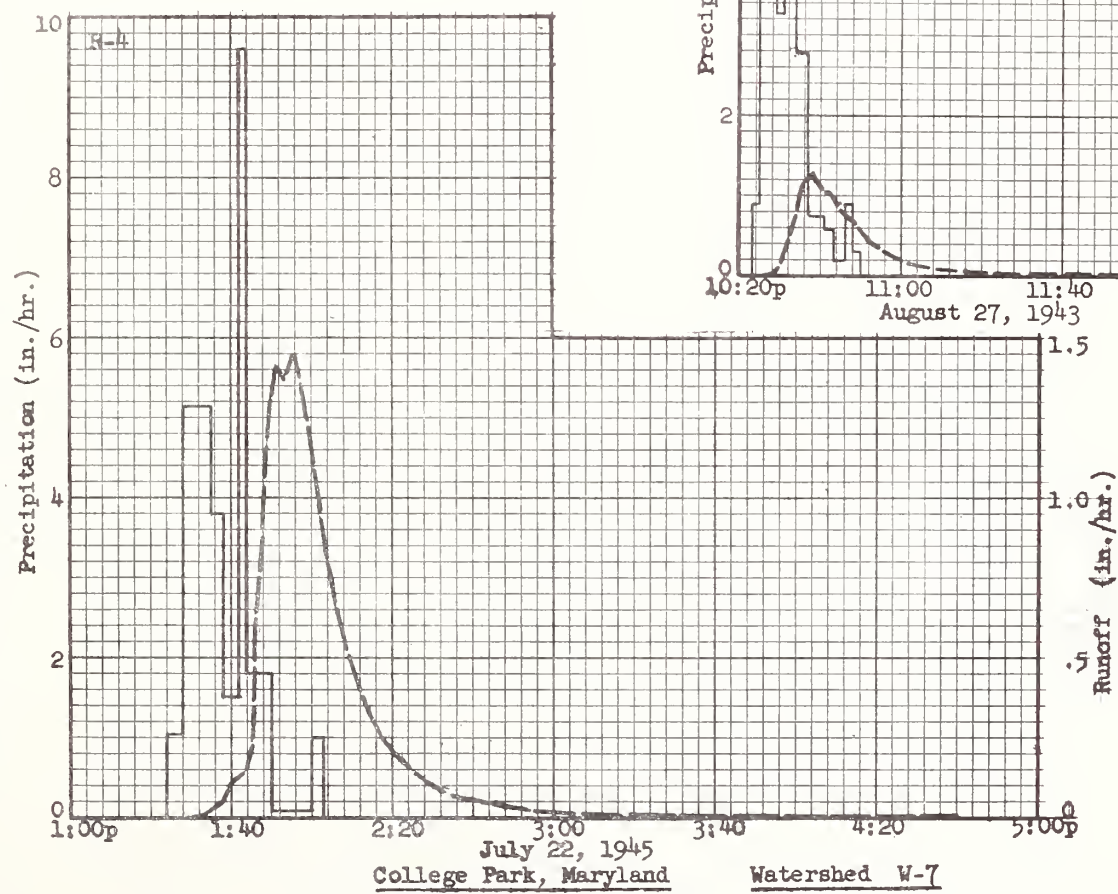
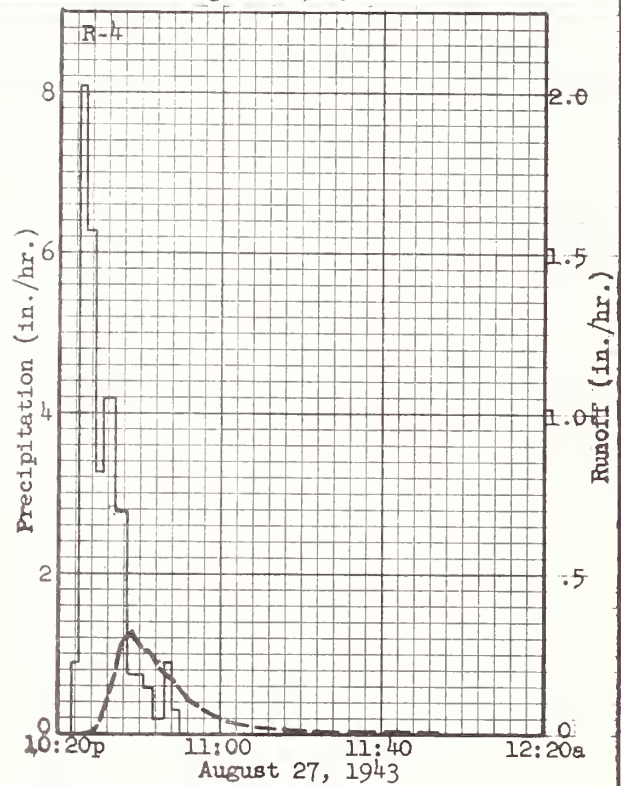
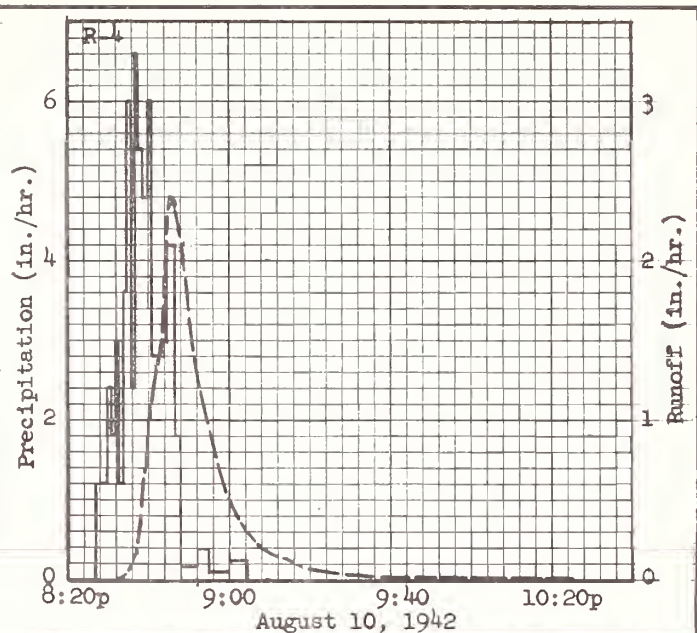
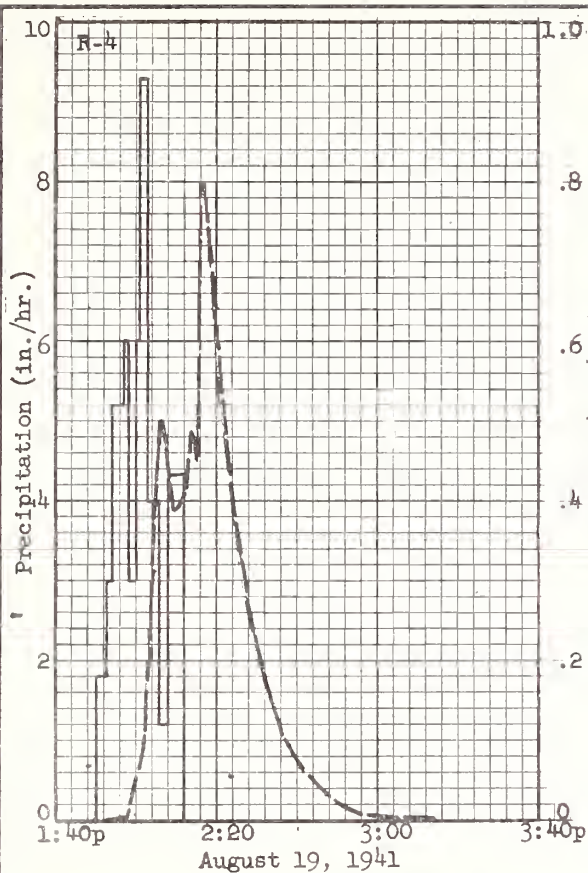
Notes: ^{1/} Area reduced to 3.52 acres 8-29-41.
^{2/} 12:30a to 7:00a.
 To convert runoff in in/hr to cfs multiply by 4.144.

College Park, Maryland			Watershed W-7			(5.7)		3.52 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of August 10, 1942									
7-11-42	.42	.0142	8-10-42	Raingage	R-4	8-10-42			
7-19	.28	.0003	8:27p	0	0	8:28p	0	0	
7-20	.31	0	:30	1.20	.06	:34	.010	.0001	
7-24	.06	0	:31	2.40	.10	:35	.041	.0005	
7-25	.58	0	:32	1.80	.13	:36	.093	.0016	
7-26	.55	.0043	:33	3.00	.18	:37	.161	.0037	
7-27	.08	0	:34	1.20	.20	:38	.296	.0075	
7-29	.02	0	:35	3.60	.26	:39	.696	.0158	
8-3	.05	0	:36	6.00	.36	:40	.856	.0288	
8-5	.13	0	:37	2.40	.40	:41	1.17	.0457	
8-7	.01	0	:38	6.60	.51	:42	1.32	.0664	
8-8	2.57	.2701	:39	5.40	.60	:43	1.39	.0891	
8-9	1.50	.2962	:40	4.80	.68	:44	1.76	.1153	
			:41	6.00	.78	:45	2.26	.1488	
			:44	2.80	.92	:46	2.42	.1878	
Watershed Conditions: Bluegrass and white clover pasture with heavy continuous grazing, com- mon fertilization and occasional mowing for weed and excess grass growth control. Herbage yield determined at 5 4ft. x 4ft. cages 18 inches high for 92 days ending Sept. 2 was .69 tons per acre, hay equivalent at 10% moisture.			:45	3.00	.97	:47	2.32	.2273	
			:47	4.20	1.11	:48	2.12	.2343	
			:48	1.80	1.14	:49	1.89	.2978	
			:52	.15	1.15	:50	1.65	.3273	
			:55	.40	1.17	:51	1.46	.3531	
			9:00	.12	1.18	:52	1.30	.3761	
			:05e	.24	1.20	:53	1.17	.3968	
						:54	1.08	.4755	
						:55	.961	.4325	
						:56	.856	.4477	
						:57	.758	.4612	
						:58	.637	.4728	
						:59	.566	.4828	
						9:00	.501	.4917	
						:02	.408	.5069	
						:04	.324	.5191	
						:06	.260	.5288	
						:08	.211	.5366	
						:10	.175	.5430	
						:15	.114	.5551	
						:18	.088	.5602	
						:21	.066	.5641	
						:27	.044	.5696	
						:33	.027	.5731	
						:39	.015	.5752	
						:45	.008	.5764	
						:51	.004	.5770	
						:57	.001	.5773	
						10:03	.001	.5774	
						:25e	0	.5774	

Notes: To convert runoff in in/hr to cfs multiply by 3.549.
For map of area, see Sheet 6 of 6 for W-6, (5.6) College Park, Maryland.

College Park, Maryland			Watershed W-7 (5.7)			3.52 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
<u>Event of August 27, 1943</u>								
8-10-43	.05	0	8-27-43	Raingage	R-4	8-27-43		
8-13	.01	0	10:23p	0	0	10:25p	0	0
8-16	.39	0	:25	.90	.03	:28	.002	.0001
8-26	.11	0	:27	8.10	.30	:29	.015	.0002
			:29	6.30	.51	:30	.044	.0007
<u>Watershed Conditions:</u> Bluegrass and white clover pasture with 15 contour pasture furrows spaced 20 ft. apart on steepest slope with occasional cross dams where furrows were slightly off contour. Total length of furrows 5405 ft. and hold about .25 inch of runoff. Furrows constructed May 2, 1943 and fertilized and seeded to bluegrass and white clover. Pasture between furrows heavily grazed with common fertilization and occasional mowing for weed and excess grass growth control. (No pasture yields taken.)			:31	3.30	.62	:31	.079	.0017
			:34	4.20	.83	:32	.114	.0033
			:37	2.80	.97	:33	.161	.0056
			:41	.75	1.02	:34	.196	.0086
			:43	.60	1.04	:35	.260	.0124
			:46	.20	1.05	:36	.296	.0170
			:48	.90	1.08	:37	.304	.0220
			:50e	.30	1.09	:38	.324	.0272
						:39	.296	.0324
						:41	.260	.0417
						:42	.260	.0460
						:44	.235	.0543
						:46	.189	.0614
						:48	.168	.0674
						:50	.136	.0725
						:52	.108	.0766
						:54	.088	.0799
						:57	.066	.0838
						11:00	.051	.0867
						:03	.041	.0890
						:06	.029	.0908
						:09	.024	.0921
						:12	.017	.0931
						:15	.013	.0939
						:18	.010	.0945
						:21	.007	.0949
						:24	.005	.0952
						:27	.003	.0954
						:33	.001	.0956
						:54e	0	.0957
<u>Event of July 22, 1945</u>								
6-22-45	.03	.0001	7-22-45	Raingage	R-4	7-22-45		
7-1	.01	0	1:24p	0	0	1:29p	0	0
7-2	1.10	.0083	:28	1.05	.07	:33	.001	0
7-5	.84	.0010	:35	5.14	.67	:34	.010	.0001
7-9	.10	0	:38	3.80	.86	:35	.027	.0004
7-10	.82	.0133	:42	1.50	.96	:37	.044	.0016
7-14	1.11	.0223	:44	9.60	1.28	:39	.079	.0036
7-15	.59	.0005	:50	1.80	1.46	:41	.119	.0069
7-17	2.45	.7272	2:00	.06	1.47	:43	.142	.0113
7-18	.79	.1285	:03e	1.00	1.52	:45	.211	.0172
Notes: To convert runoff in in/hr to cfs multiply by 3.549. For map of area, see Sheet 6 of 6 for W-6, (5.6) College Park, Maryland.								

College Park, Maryland			Watershed W-7 (5.7)			3.52 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 22, 1945 Cont'd.								
7-19-45	.68	.360				1:45 ¹ _{2P}	.344	.0195
7-20	.02	0				:46	.552	.0232
						:47	.823	.0347
						:48	.997	.0499
						:49	1.190	.0681
<u>Watershed Conditions:</u> Bluegrass and white clover pasture with 15 contour pasture furrows (total length 5405 ft.) spaced 20 ft. apart on steepest slope with occasional cross dams. Pasture heavily grazed with common fertilization and occasional mowing for weed and grass growth control. Herbage yield under 5 pairs of 4 ft. x 4 ft. cages 18 inches high for period ending July 31, 1945 was 1.76 tons per acre, hay equivalent at 10% moisture.						:50	1.320	.0889
						:51	1.410	.1117
						:53	1.370	.1580
						:55	1.440	.2047
						:56	1.440	.2287
						:59	1.240	.2957
						2:02	.961	.3508
						:05	.741	.3934
						:08	.566	.4261
						:11	.431	.4511
						:14	.335	.4703
						:18	.243	.4896
						:22	.182	.5037
						:26	.136	.5143
						:30	.103	.5223
						:36	.070	.5310
						:42	.051	.5371
						:48	.035	.5414
						:54	.024	.5443
						3:00	.015	.5463
						:10	.007	.5481
						:20	.002	.5488
						:30	.001	.5490
						4:40e	0	.5492
Notes: To convert runoff in in/hr to cfs multiply by 3.549. For map of area, see Sheet 6 of 6 for W-6, (5.6) College Park, Maryland.								



For map of area see Sheet 6 of 6 for (5.6) Watershed W-6 at College Park, Maryland.

July 22, 1945
College Park, Maryland Watershed W-7

College Park, Maryland			Watershed W-8			(5.8)			2.43 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of May 11-14, 1943											
4-12-43	.10	0	5-11-43	Raingage	R-1	5-11-43					
4-13	.34	0	8:29p	0	0	8:34p	0	0			
4-14	0	.0038	:31	1.50	.05	10:28	.001	.0003			
4-17	.29	.0039	:33	.50	.07	:48	.002	.0007			
4-18	0	.0022	ceased			11:18	.003	.0018			
4-19	1.35	.4576	:38	0	.07	12 Mt	.004	.0039			
4-20	.80	.1583	:39	2.40	.11	5-12-43					
4-21	.08	.4513	:40	3.60	.17	4:00a	.005	.0209			
4-22	0	.0352	:42	3.30	.28	5:00	.008	.0274			
4-23	0	.0089	:44	.60	.30	:05	.010	.0282			
4-24	0	.0018	9:00	.08	.32	:10	.014	.0292			
4-30	.01	0	:14	.21	.37	:20	.022	.0322			
5-2	.12	0	:30	.08	.39	:30	.030	.0365			
5-6	.02	0	10:00	.04	.41	:35	.044	.0396			
5-7	.15	0	:25	.02	.42	:40	.056	.0438			
5-8	.15	0	11:00	.03	.44	:46	.065	.0499			
5-9	.19	0	:50e	.01	.45	:52	.080	.0572			
5-10	.23 _{1/}	.0037				6:12	.085	.0847			
5-11	.02 _{1/}	0	5-12-43			:32	.080	.1123			
			1:10a	0	.45	7:32	.065	.1849			
Watershed Conditions: Second growth pine and hardwoods: fair to excellent litter on woodland floor 75%; scattered areas of laurel and blueberries with occasional spots bare of litter but moss-covered 25%. Leaves on trees fully developed.			:28	.03	.46	8:10	.052	.2222			
			:30	.30	.47	:15	.061	.2269			
			:52	.03	.48	:25	.070	.2378			
			:57	.12	.49	:35	.080	.2503			
			2:00	.20	.50	:50	.091	.2717			
			:02	.30	.51	9:20	.091	.3170			
			:08	.10	.52	:40	.102	.3491			
			:14	.30	.55	10:04	.108	.3911			
			:28	.21	.60	:14	.108	.4092			
			:40	.05	.61	:34	.102	.4442			
			ceased								
			3:02	0	.61	:54	.091	.4763			
			:04	1.20	.65	11:24	.075	.5177			
			:06	.30	.66	:54	.065	.5528			
			ceased			12:24p	.056	.5832			
			:13	0	.66	:44	.052	.6013			
			:14	2.40	.70	1:44	.040	.6476			
			:15	1.20	.72	2:44	.030	.6829			
			:20e	.12	.73	3:16	.024	.6974			
						:32	.027	.7043			
			5:05a	0	.73	4:02	.024	.7172			
			:07	.60	.75	6:02	.017	.7582			
			:10	.20	.76	8:02	.012	.7870			
			:11	4.80	.84	12 Mt	.008	.8275			
			:15	1.05	.91	5-13-43					
			:17	.60	.93	4:00a	.005	.8535			
			:23	.70	1.00	8:00a	.004	.8707			
			:32	.07	1.01	12 N	.003	.8827			
			:36	1.20	1.09	4:00p	.002	.8931			
			:38	2.10	1.16	12 Mt	.001	.9027			
			:42e	.30	1.18	5-14-43	(Cont'd next page)				

Notes: To convert runoff in in/hr to cfs multiply by 2.45.
1/ 7:00a to 9:00a.

Notes: To convert runoff in in/hr to cfs multiply by 2.45.
_{1/} 7:00a to 9:00a.

College Park, Maryland			Watershed W-8			(5.8)			2.43 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of May 11-14, 1943 Cont'd											
			7:00a	0	1.18	12 Mt(e)	0	.9075			
			:33	.04	1.20						
			ceased								
			8:04	0	1.20						
			:08	.15	1.21						
			:16	.98	1.34						
			:24	.60	1.42						
			:27	.20	1.43						
			:32	.84	1.50						
			9:00	.15	1.57						
			:18	.07	1.59						
			:23	.72	1.65						
			:34	.11	1.67						
			:40	.40	1.71						
			:48	.08	1.72						
			10:00e	.30	1.78						
			3:15p	0	1.78						
			:30e	.36	1.87						
			6:00p	0	1.87						
			:04	.75	1.92						
			:51e	.03	1.94						
			1/	1/	1/						
			Std raingage S-6		2.06						
Event of November 8-9, 1943											
10-14-43	.02	0	11-8-43	Raingage	R-1	11-8-43					
10-15	.12	0	4:37p	0	0	7:33p	0	0			
10-16	.28	0	:40	.20	.01	:38	.004	0			
10-18	.01	0	:56	.08	.03	:39	.006	.0001			
10-25	.60	0	ceased			:40	.010	.0002			
10-26	.00	.0006	5:50	0	.03	:41	.017	.0004			
10-28	.32	0	6:00	.06	.04	:44	.010	.0011			
11-2	.53	0	:20	.03	.05	:46	.008	.0014			
11-3	.35	0	:24	.15	.06	:48	.008	.0017			
11-5	.02	0	:35	.05	.07	:54	.006	.0024			
11-8	.23 ^{2/}	0	:52	.14	.11	:55	.014	.0026			
Watershed Conditions: Second growth pine and hardwoods with 60% of leaves from hardwoods fallen: fair to excellent litter on woodland floor 75%; scattered areas of laurel and blueberries, with occasional spots bare of litter but moss-covered 25%. Lower 230 feet of natural waterway swept clean of leaves and debris. White oak 10 inches DBH uprooted.			7:00	.23	.14	:56	.024	.0029			
			:08	.08	.15	:57	.048	.0035			
			:11	.20	.16	:58	.061	.0044			
			:17	.10	.17	8:00	.075	.0067			
			:26	.60	.26	:02	.085	.0094			
			:27	3.00	.31	:04	.096	.0124			
			:32	.84	.38	:06	.102	.0157			
			:35	3.80	.57	:12	.114	.0265			
			:37	5.70	.76	:24	.114	.0494			
			:38	3.60	.82	:36	.102	.0710			
			:41	5.80	1.11	:41	.102	.0795			
			:43	1.80	1.17	:43	.108	.0830			
			:45	.90	1.20	:46	.114	.0886			
			:47	3.90	1.33	:50	.134	.0969			
Notes: To convert runoff in in/hr to cfs multiply by 2.45.											
1/ .03" rain occurred 9:30p to 11:30p, 5-14-43.											
2/ 12:30 a to 1:45p.											

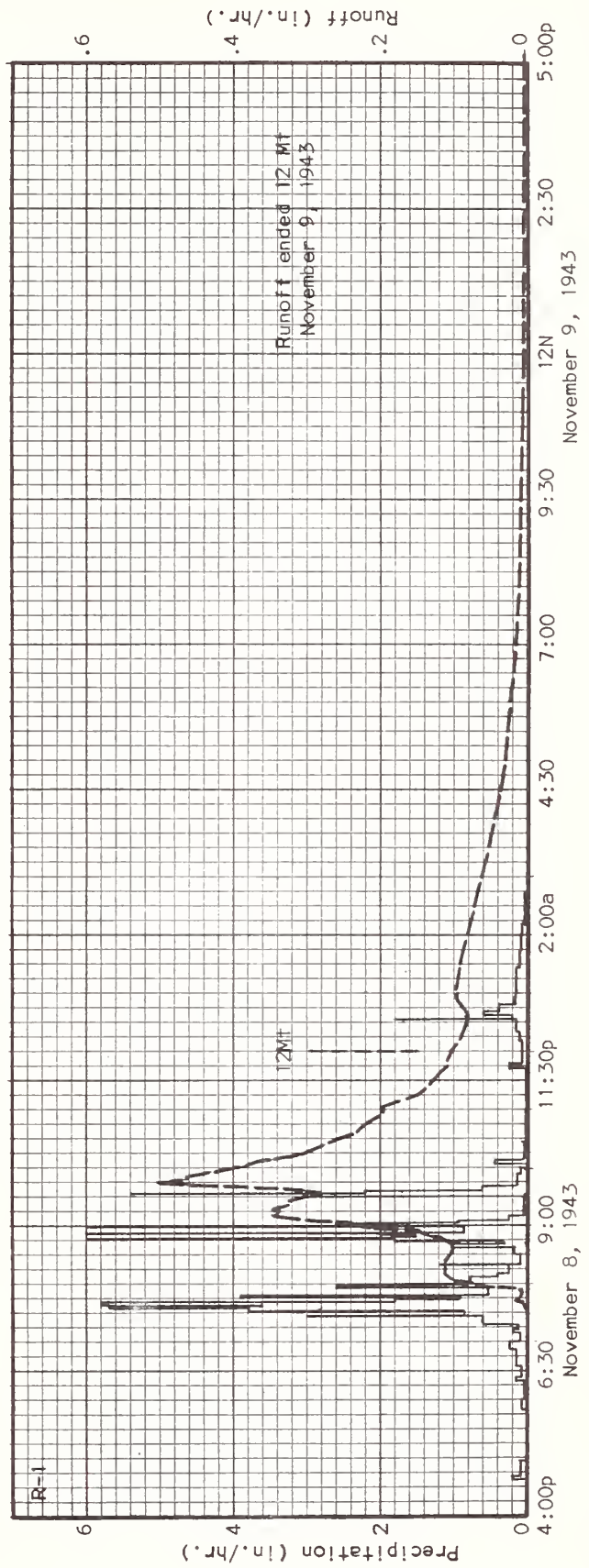
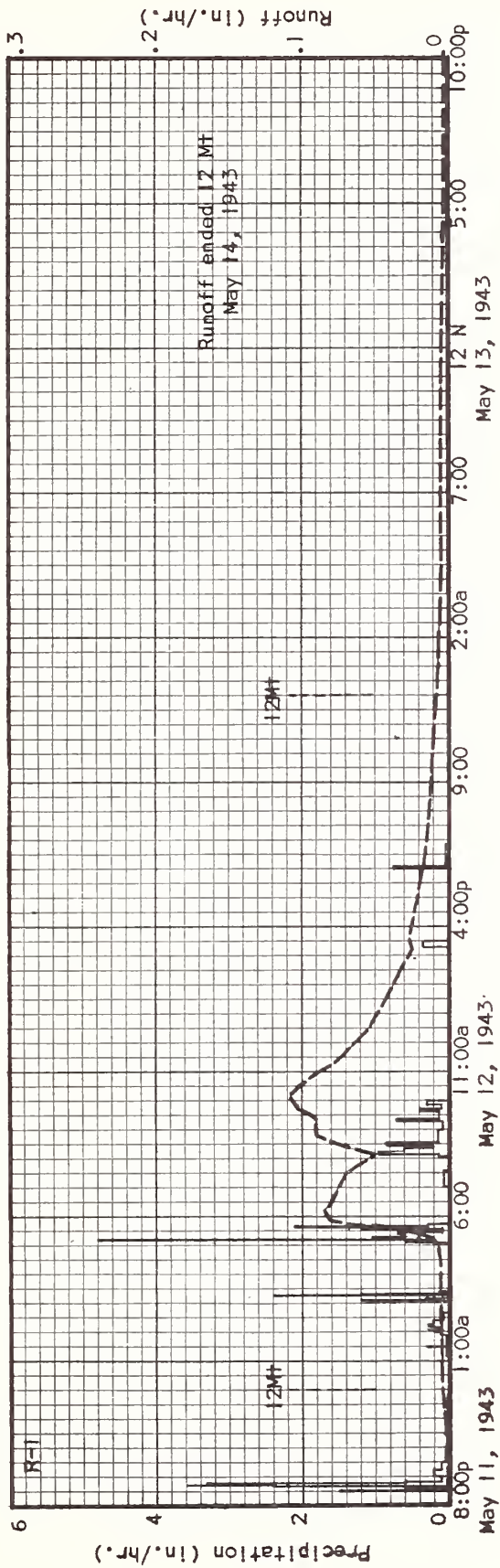
College Park, Maryland			Watershed W-8			(5.8)		2.43 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of November 8-9, 1943 Cont'd									
			7:54p	.51	1.39	8:52p	.148	.1016	
			:57	2.60	1.52	:54	.163	.1068	
			8:00	.80	1.56	:55	.163	.1095	
			:07	.77	1.65	:57	.196	.1155	
			:10	.40	1.67	:59	.222	.1225	
			:20	.24	1.71	9:02	.240	.1340	
			:21	1.20	1.73	:04	.290	.1428	
			:30	.07	1.74	:05	.290	.1476	
			:37	.17	1.76	:06	.312	.1526	
			:41	1.05	1.83	:09	.335	.1688	
			:43	.30	1.84	:12	.346	.1858	
			:46	1.80	1.93	:15	.335	.2028	
			:47	6.00	2.03	:16	.346	.2085	
			:49	1.50	2.08	:22	.323	.2420	
			:52	2.00	2.18	:26	.323	.2635	
			:53	3.00	2.23	:32	.280	.2937	
			:54	6.00	2.33	:34	.280	.3030	
			:59	.84	2.40	:36	.302	.3127	
			9:00	6.00	2.50	:38	.346	.3235	
			:03	2.60	2.63	:39	.395	.3297	
			:05	.90	2.66	:40	.395	.3363	
			:10	.24	2.68	:41	.461	.3434	
			:30	.03	2.69	:43	.461	.3588	
			:33	3.00	2.84	:44	.474	.3666	
			:34	5.40	2.93	:45	.503	.3747	
			:37	2.20	3.04	:46	.461	.3827	
			:40	.60	3.07	:49	.461	.4058	
			:53	.14	3.10	:55	.421	.4499	
			10:00	.09	3.11	10:01	.383	.4901	
			ceased			:07	.346	.5265	
			:04	0	3.11	:13	.312	.5594	
			:08	.45	3.14	:19	.290	.5895	
			:25	.04	3.15	:25	.270	.6175	
			11:00	.02	3.16	:31	.250	.6435	
			:43	.01	3.17	:37	.232	.6676	
			:48	.24	3.19	:43	.222	.6903	
			12 Mt	.05	3.20	:55	.196	.7321	
			11-9-43			11:05	.196	.7648	
			12:12a	.05	3.21	:15	.148	.7935	
			:20	.08	3.22	:25	.134	.8170	
			:33	.14	3.25	:35	.121	.8382	
			:34	1.80	3.28	:45	.108	.8573	
			:37	.20	3.29	:50	.108	.8663	
			:40	.60	3.32	12 Mt	.102	.8838	
			:48	.38	3.37	11-9-43			
			1:00	.15	3.40	12:12a	.091	.9031	
			:25	.14	3.46	:24	.085	.9207	
			:45	.09	3.49	:36	.080	.9372	
			2:00	.08	3.51	:42	.085	.9455	
			:10	.06	3.52	:48	.091	.9543	

Notes: To convert runoff in in/hr to cfs multiply by 2.45.

College Park, Maryland			Watershed W-8			(5.8)			2.43 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of November 8-9, 1943 Cont'd											
			2:40a (e)	.02	3.53	12:51a	.096	.9590			
						1:03	.096	.9783			
						:33	.091	1.0250			
			St'd raingage S-6		3.77	2:03	.080	1.0678			
						:33	.070	1.1054			
						3:03	.061	1.1381			
						:33	.052	1.1663			
						4:03	.044	1.1904			
						:33	.037	1.2107			
						5:03	.030	1.2275			
						:33	.027	1.2419			
						6:03	.022	1.2542			
						:33	.019	1.2643			
						7:00	.017	1.2723			
						8:00	.012	1.2867			
						9:00	.008	1.2969			
						11:00	.005	1.3099			
						1:00p	.004	1.3185			
						3:00	.003	1.3245			
						5:00	.002	1.3285			
						7:00	.001	1.3307			
						12 Mt(e)	0	1.3320			
Event of July 26-28, 1945											
7-1-45	.01	0	7-26-45	Raingage	R-1	7-26-45					
7-2	1.11	0	10:22p	0	0	10:28p	0	0			
7-5	.78	0	:25	1.40	.07	:53	.001	0			
7-9	.11	0	:37	.25	.12	:54	.003	0			
7-10	.82	0	:42	.60	.17	11:00	.004	.0003			
7-14	1.12	.0001	:43	3.60	.23	:10	.005	.0010			
7-15	.58	.0059	:45	4.20	.37	:14	.006	.0014			
7-17	2.55	.4312	:51	4.30	.80	:15	.012	.0016			
7-18	.79	1.1734	:53	1.80	.86	:17	.027	.0023			
7-19	.72	.3373	:58	.72	.92	:19	.040	.0034			
7-20	.02	.0342	11:00	1.20	.96	:22	.056	.0058			
7-22	1.81	.6324	:03	2.00	1.06	:25	.080	.0092			
7-23	0	.0703	:11	.68	1.15	:30	.102	.0168			
7-24	.02	.0004	:13	1.80	1.21	:35	.121	.0261			
			:17	.75	1.26	:37	.127	.0302			
Watershed Conditions: Second growth pine and hardwoods: fair to excellent litter on woodland floor 80%; scattered areas of laurel and some blueberries with occasional spots bare of litter but moss-covered 20%. Lower 100 feet of natural channel washed clean of leaves and debris.			:19	.60	1.28	:40	.141	.0369			
			:23	1.20	1.36	:45	.171	.0499			
			:30	.51	1.42	:48	.187	.0589			
			:37	.86	1.52	:54	.204	.0785			
			:39	1.80	1.58	12 Mt	.213	.0994			
			:46	.77	1.67	7-27-45					
			:52	.20	1.69	12:06a	.222	.1212			
			12 Mt	.08	1.70	:11	.222	.1397			
			7-27-45			:21	.204	.1752			
			12:38a	0	1.70	:36	.187	.2241			
Notes: To convert runoff in in/hr to cfs multiply by 2.45.											

College Park, Maryland			Watershed W-8			(5.8)		2.43 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of July 26-28, 1945 Cont'd									
			12:40a	.60	1.72	12:51a	.163	.2679	
			:55	.04	1.73	1:06	.148	.3068	
			1:15e	.12	1.77	:21	.134	.3421	
						2:21	.091	.4579	
			St'd raingage S-6		1.97	3:21	.061	.5336	
			7-28-45			4:21	.048	.5880	
			7:00a	0	0	5:21	.034	.6287	
			8:00	.01	.01	6:21	.027	.6591	
			9:00	.01	.02	7:21	.022	.6835	
			10:00e	.01	.03	8:21	.017	.7026	
			St'd raingage S-6		.03	9:51	.012	.7242	
						11:51	.008	.7446	
						2:51p	.005	.7629	
						5:51	.003	.7740	
						7:51	.002	.7780	
						12 Mt	.001	.7830	
						7-28-45			
						3:00p(e)	0	.7886	
Event of November 24-27, 1950									
10-28-50	.14	0	11-24-50	Raingage	R-1	11-25-50			
11-4	1.12	.0569	9:00p	0	0	4:54a	0	0	
11-5	0	.0232	11:00	.01	.02	:56	.003	0	
11-11	.02 ^{1/}	0	:45	.01	.03	5:00	.004	.0002	
11-20	.55	0	:50	.12	.04	:10	.004	.0008	
Watershed Conditions: Second growth pine and hardwoods with 95% of deciduous leaves fallen: fair to excellent litter on woodland floor 85%; scattered areas of laurel and other bushes with a few spots bare of litter but moss-covered 15%. Lower 100 feet of natural channel had leaves and debris washed out in places.			12 Mt	.06	.05	:15	.005	.0012	
			11-25-50			:20	.017	.0021	
			12:45a	.03	.07	:30	.024	.0055	
			:55	.12	.09	:40	.034	.0103	
			1:00	.24	.11	:50	.044	.0168	
			:07	.17	.13	6:00	.056	.0252	
			:45	.03	.15	:10	.065	.0353	
			:55	.12	.17	:25	.075	.0528	
			2:00	.24	.19	:35	.102	.0676	
			:15	.12	.22	:45	.148	.0884	
			:21	.40	.26	:55	.195	.1170	
			:35	.30	.33	7:00	.231	.1347	
			:55	.21	.40	:02	.358	.1445	
			3:00	.24	.42	:05	.358	.1624	
			:15	.20	.47	:08	.323	.1794	
			:20	.36	.50	:10	.335	.1904	
			:30	.18	.53	:20	.301	.2434	
			:45	.24	.59	:30	.270	.2910	
			4:00	.12	.62	:40	.250	.3343	
			:15	.12	.65	:50	.231	.3744	
			:25	.30	.70	8:00	.213	.4114	
			:37	.35	.77	:20	.179	.4767	
			:53	.45	.89	:40	.148	.5312	
			5:00	.26	.92	9:00	.127	.5770	
			:28	.28	1.05	:30	.108	.6358	
Notes: To convert runoff in in/hr to cfs multiply by 2.45. 1/ Included .01" snow.									

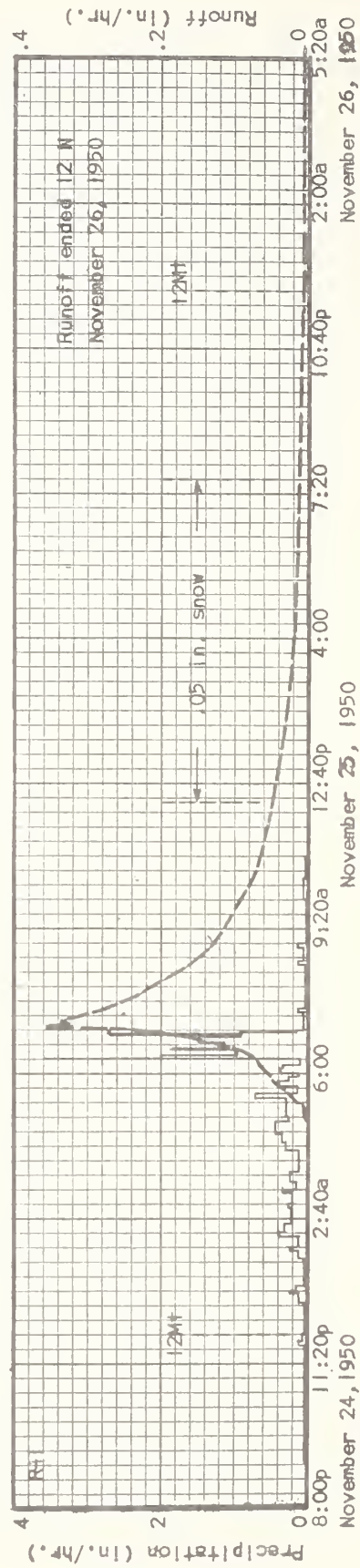
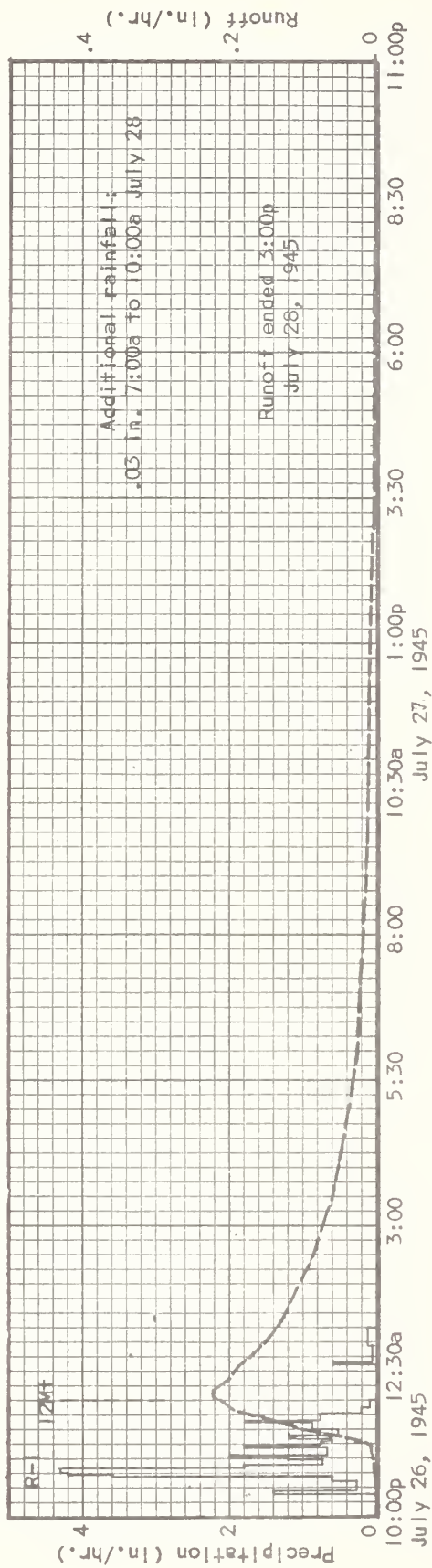
College Park, Maryland			Watershed W-8			(5.8)		2.43 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of November 24-27, 1950 Cont'd									
			5:33a	.72	1.11	10:00a	.091	.6855	
			:42	.13	1.13	:30	.075	.7269	
			:48	.40	1.17	11:00	.065	.7620	
			:55	.26	1.20	12 N	.052	.8207	
			6:00	.12	1.21	1:00p	.040	.8670	
			:08	.38	1.26	2:00	.030	.9023	
			:13	.36	1.29	4:00	.019	.9517	
			:20	.09	1.30	6:00	.014	.9849	
			:21	3.60	1.36	8:00	.010	1.0093	
			:24	2.00	1.46	10:00	.008	1.0277	
			:32	.98	1.59	12 Mt	.005	1.0407	
			:34	1.80	1.65	11-26-50			
			:42	1.13	1.80	4:00a	.004	1.0579	
			:50	1.50	2:00	7:00	.003	1.0669	
			:54	2.70	2.12	2:00p	.001	1.0778	
			:56	.90	2.15	12 Mt	.001	1.0851	
			7:00	.15	2.16	11-27-50			
			:25	.05	2.18	12 N(e)	0	1.0902	
			:30	.12	2.19				
			8:00a	.02	2.20				
			:30	.02	2.21				
			:35	.12	2.22				
			:55	.03	2.23				
			9:00	.12	2.24				
			10:00	.01	2.25				
			:30	.04	2.27				
			11:00e	.02	2.28				
			12:15p	Snow	2.28				
			1:00e	"	2.31				
			4:00p	"	2.31				
			5:00e	"	2.32				
			7:00p	"	2.32				
			:40e	"	2.33				
			St'd raingage S-6		2.07				
Notes: To convert runoff in in/hr to cfs multiply by 2.45.									



College Park, Maryland

Watershed W-8

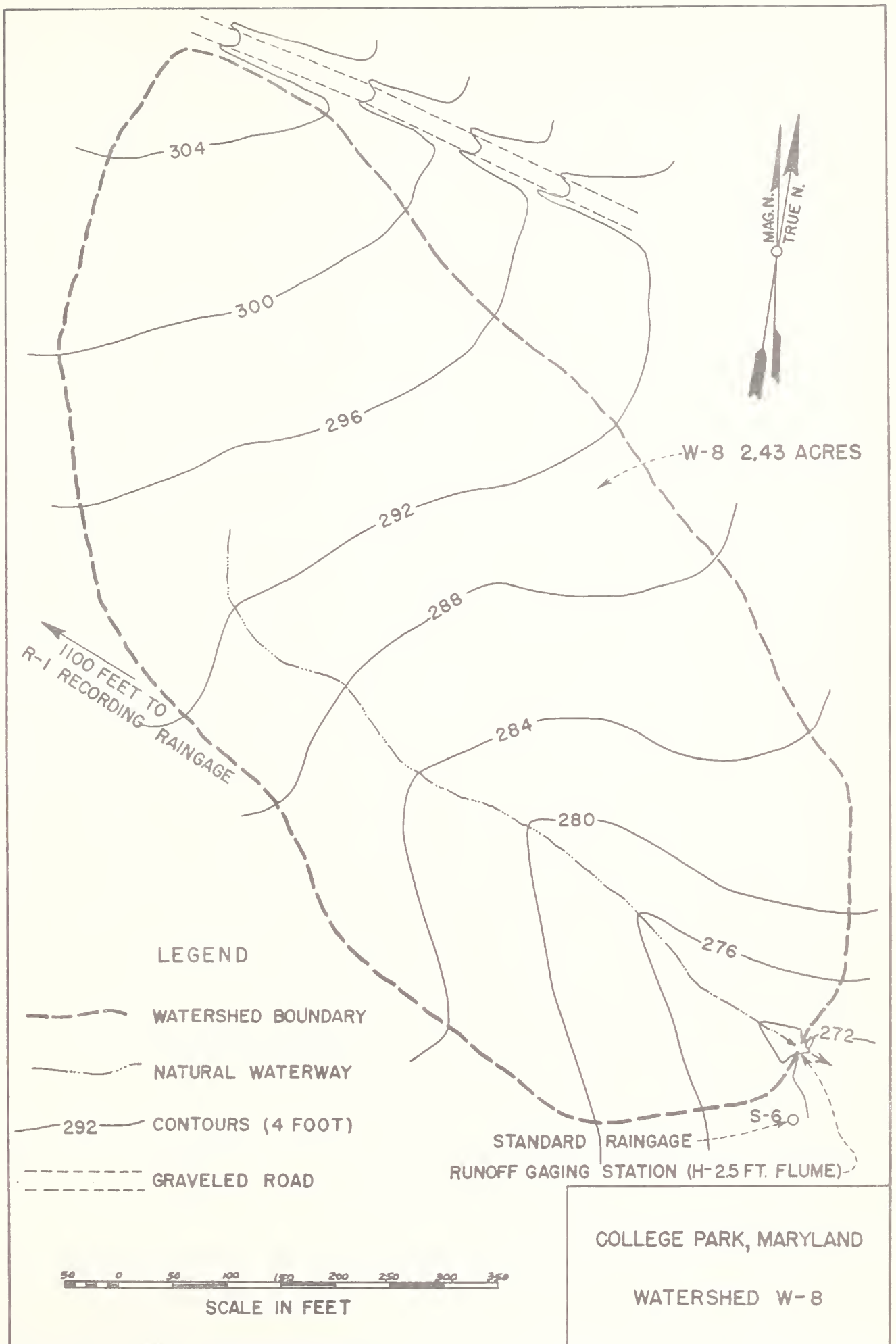
1943



College Park, Maryland

Watershed W-8

1945-50



College Park, Maryland			Watershed W-9			(5.9)		12.05 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of May 12-15, 1943									
4-12-43	.11	0	5-12-43	Raingage	R-5	5-12-43			
4-13	.33	.0001	1:05a	0	0	5:00a	0	0	
4-14	0	.0003	:56	.07	.06	8:45	.001	.0011	
4-17	.28	0	2:00	.15	.07	9:00	.001	.0013	
4-19	1.36	.0283	:09	.20	.10	:03	.002	.0014	
4-20	.78	.0357	:30	.23	.18	:16	.002	.0027	
4-21	.06	.0886	ceased			:22	.003	.0030	
4-22	0	.0111	3:00	0	.18	:42	.004	.0041	
4-23	0	.0024	:04	.75	.23	:57	.004	.0051	
4-24	0	.0007	:11	.09	.24	10:47	.005	.0090	
4-30	.01	0	:13	1.20	.28	11:20	.006	.0119	
5-2	.12	0	:20e	.09	.29	:26	.006	.0125	
5-6	.02	0				:32	.008	.0132	
5-7	.21	0	5:03a	0	.29	:38	.009	.0141	
5-8	.12	0	:06	.60	.32	:44	.010	.0151	
5-9	.15	0	:09	2.40	.44	:50	.011	.0162	
5-10	.20 _{1/}	0	:20	.71	.57	12:05p	.012	.0191	
5-11	.42 _{1/}	0	:29	.13	.59	:09	.012	.0199	
			:34	.96	.67	:29	.011	.0237	
			:35	7.20	.79	:49	.010	.0272	
Watershed Conditions: Mature stand of mixed hardwoods with some scrub pine, with a dense canopy overhead and practically no undergrowth and excellent litter on forest floor. Leaves and litter in natural waterway undisturbed. Leaves on deciduous trees fully grown.			:40e	.12	.80	1:19	.009	.0321	
						:59	.008	.0377	
			8:04a	0	.80	2:59	.006	.0447	
			:14	.78	.93	3:59	.006	.0507	
			:23	.53	1.01	4:59	.005	.0560	
			:25	.30	1.02	6:59	.004	.0654	
			:29	.90	1.08	8:59	.004	.0736	
			:40	.22	1.40	12 Mt	.003	.0839	
			9:00	.12	1.44	5-13-43			
			:14	.09	1.46	5:00a	.002	.0959	
			:25	.49	1.55	10:00	.001	.1034	
			:31	.10	1.56	3:00p	.001	.1079	
			:36	.36	1.59	5-15-43			
			:45	.07	1.60	10:00a	0	.1167	
			10:00e	.24	1.66	(e)			
			3:16p	0	1.66				
			:30	.47	1.77				
			4:00e	.02	1.78				
			5:57p	0	1.78				
			6:00	.40	1.80				
:05	.96	1.88							
ceased									
:42	0	1.88							
:50e	.45	1.94							
5-14-43									
9:30a	0	0							
11:30a(e)	.01	.03							
5-15-43									
7:00a	0	0							
9:00a(e)	.01	.02							

Notes: To convert runoff in in/hr to cfs multiply by 12.15.
1/ .40 inch rain 8:26p to 10:30p.

Notes: To convert runoff in in/hr to cfs multiply by 12.15.
_{1/} .40 inch rain 8:26p to 10:30p.

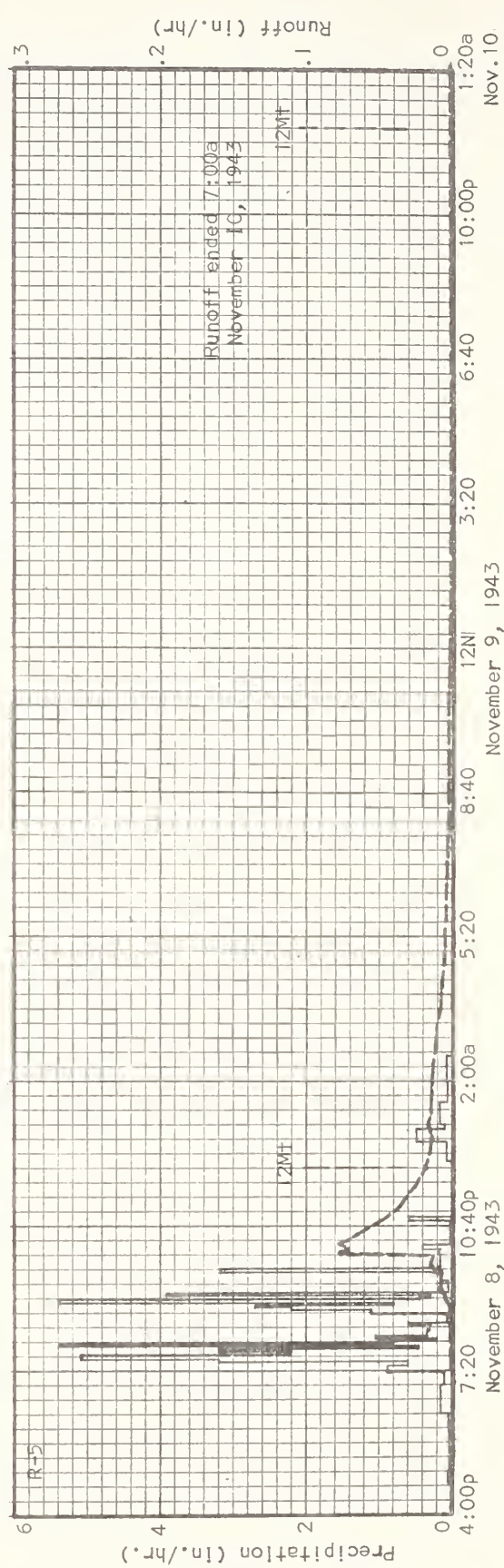
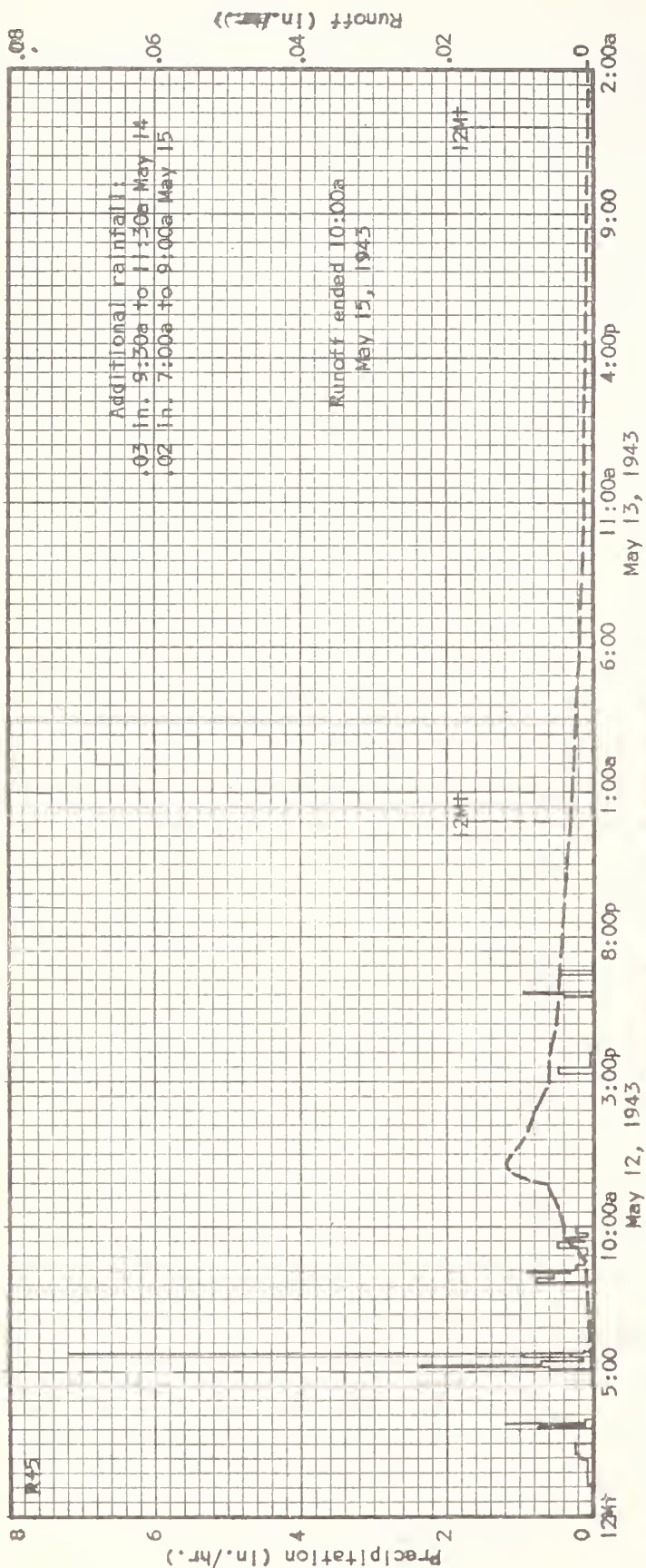
College Park, Maryland			Watershed W-9			(5.9)			12.05 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of November 8-10, 1943											
10-14-43	.03	0	11-8-43	Raingage	R-5	11-8-43					
10-15	.12	0	4:45p	0	0	7:22p	0	0			
10-16	.37	0	5:00	.04	.01	8:24	.001	.0001			
10-25	.50	0	6:00	.02	.03	:45	.001	.0003			
10-26	2.88	T	:20	.03	.04	:52	.002	.0004			
10-28	.32	0	7:00	.14	.13	:56	.002	.0006			
11-2	.55	T	:17	.11	.16	:57	.004	.0007			
11-3	.35	0	:26	.87	.29	9:03	.004	.0011			
11-5	.02 _{1/}	0	:32	.60	.35	:07	.007	.0015			
11-8	.21 _{1/}	0	:35	3.20	.51	:11	.008	.0020			
Watershed Conditions: Mature stand of mixed hardwoods with some scrub pine, with 75% of deciduous leaves off trees, practically no undergrowth and excellent litter on the forest floor. Leaves and litter moved downstream in natural waterway for short distances in lower 850 feet of channel.			:41	5.10	1.02	:23	.008	.0037			
			:44	2.20	1.13	:35	.007	.0052			
			:47	3.20	1.29	:38	.010	.0056			
			:55	.45	1.35	:40	.012	.0060			
			:57	5.40	1.53	:42	.014	.0064			
			8:00	.80	1.57	:48	.015	.0078			
			:03	.20	1.58	:59	.013	.0103			
			:07	1.05	1.65	10:00	.027	.0106			
			:14	.34	1.69	:01	.051	.0113			
			:22	.30	1.73	:02	.078	.0124			
			:24	.60	1.75	:08	.071	.0199			
			:38	.04	1.76	:15	.078	.0286			
			:44	1.10	1.87	:20	.071	.0348			
			:47	2.20	1.97	:26	.066	.0417			
			:49	2.70	2.06	:32	.062	.0481			
			:52	.80	2.10	:38	.057	.0541			
			:56	5.40	2.46	:44	.051	.0595			
			9:00	.45	2.49	:56	.043	.0689			
			:02	.30	2.50	11:08	.036	.0769			
			:06	3.90	2.76	:20	.030	.0835			
			:10	.60	2.80	:32	.026	.0891			
			:26	.04	2.81	:44	.022	.0939			
			:34	.15	2.83	:52	.021	.0967			
			:41	3.17	3.20	12 Mt	.018	.0993			
			10:00	.16	3.25	11-9-43					
			:07	.17	3.27	12:10a	.017	.1022			
			:13	.40	3.31	:20	.015	.1049			
			11:00	.01	3.32	:32	.014	.1078			
			:47	.01	3.33	:42	.013	.1100			
			:52	.60	3.38	:47	.015	.1112			
			ceased								
			11-9-43			:58	.016	.1140			
			12:10a	0	3.38	1:10	.015	.1171			
			:36	.09	3.42	:40	.014	.1243			
			:54	.50	3.57	2:20	.013	.1332			
			1:00	.10	3.58	:50	.012	.1394			
			:31	.17	3.67	3:20	.010	.1449			
			2:00	.06	3.70	:40	.008	.1480			
			:36e	.07	3.74	4:00	.008	.1507			
						:30	.006	.1542			
						5:00	.005	.1570			

Notes: To convert runoff in in/hr to cfs multiply by 12.15.
1/ 9:32a to 1:00p.

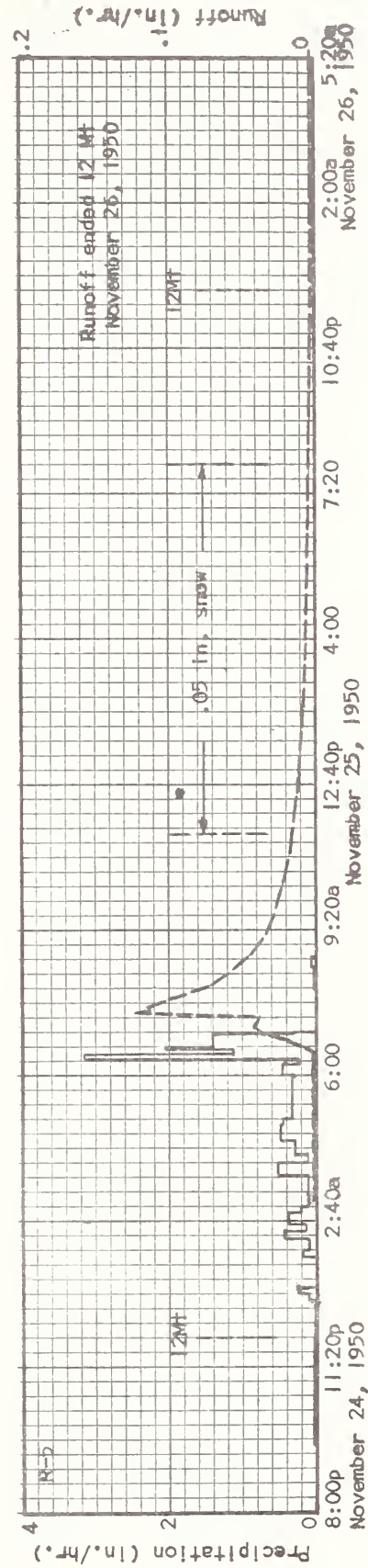
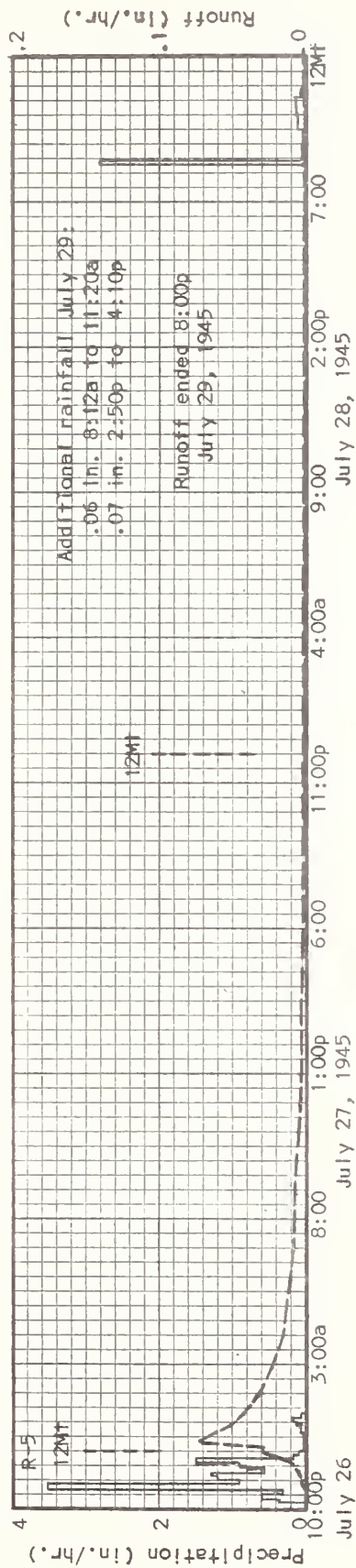
College Park, Maryland			Watershed W-9			(5.9)			12.05 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time.	Rate (in/hr)	Acc. (inches)			
Event of November 8-10, 1943 Cont'd											
						5:30a	.004	.1594			
						6:00	.004	.1615			
						:30	.003	.1633			
						7:00	.003	.1649			
						:40	.002	.1666			
						11:00	.002	.1729			
						1:00p	.001	.1755			
						5:00	.001	.1791			
						11-10-43					
						7:00a	0	.1826			
						(e)					
Event of July 26-31, 1945											
7-1-45	.01	0	7-26-45	Raingage	R-5	7-26-45					
7-2	1.22	.0003	10:15p	0	0	10:40p	0	0			
7-3	0	.0003	:20	.36	.03	:48	.001	0			
7-5	.90	.0003	:31	.60	.14	:52	.002	.0001			
7-6	0	.0004	:37	.30	.17	11:00	.001	.0003			
7-9	.11	0	:52	3.52	1.05	:04	.002	.0004			
7-10	.67	0	11:00	.90	1.17	:08	.003	.0005			
7-14	1.13	.0005	:06	1.20	1.29	:12	.004	.0007			
7-15	.63	.0011	:12	1.30	1.42	:14	.005	.0009			
7-16	0	.0001	:23	.55	1.52	:20	.006	.0015			
7-17	2.33	.0193	:29	.80	1.60	:32	.009	.0031			
7-18	.81	.2744	:33	.90	1.66	:36	.011	.0038			
7-19	.57	.0572	:43	1.50	1.91	:41	.015	.0049			
7-20	.05	.0182	:53	.18	1.94	:46	.017	.0062			
7-21	0	.0012	12 Mt	.09	1.95	:52	.026	.0083			
7-22	1.52	.1001	7-27-45			:56	.029	.0101			
7-23	0	.0370	12:36a	.02	1.96	12 Mt	.030	.0121			
7-24	.02	.0045	:56	.06	1.98	7-27-45					
7-25	0	.0002	1:00	.15	1.99	12:10a	.029	.0168			
			:10	.18	2.02	:11	.030	.0173			
Watershed Conditions: Mature stand of mixed hardwoods with some scrub pine, a full canopy overhead and excellent litter on forest floor. Leaves and litter in natural waterway piled up at places by channel flow.			:20e	.06	2.03	:12	.035	.0178			
						:13	.051	.0185			
			7-28-45			:14	.066	.0195			
			8:17p	0	0	:16	.071	.0218			
			:23	2.80	.28	:21	.073	.0278			
			9:00	.05	.31	:41	.060	.0499			
			:30	.04	.33	:56	.051	.0637			
			10:00	.12	.39	1:16	.043	.0795			
			:09	.13	.41	:36	.038	.0931			
			:35	.14	.47	:56	.033	.1051			
			10:50e	.07	.50	2:56	.023	.1331			
						3:56	.016	.1526			
			7-29-45			4:56	.013	.1670			
			8:12a	0	0	5:56	.010	.1784			
			9:00	.03	.02	6:56	.008	.1873			
Notes: To convert runoff in in/hr to cfs multiply by 12.15.											

College Park, Maryland			Watershed W-9			(5.9)		12.05 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of July 26-31, 1945 Cont'd									
			10:00a	.02	.04	8:56a	.007	.2015	
			11:00	.01	.05	10:56	.004	.2125	
			:20e	.03	.06	12:56p	.003	.2201	
			2:50p	0	0	2:56	.003	.2263	
						5:56	.002	.2335	
			3:00	.06	.01	12 Mt	.001	.2426	
			:20	.09	.04	7-28-45			
			ceased			11:00a	.0006	.2519	
			:45	0	.04	8:19p	.0004	.2565	
			4:00	.08	.06	:21	.0009	.2565	
			:10e	.06	.07	:34	.0006	.2567	
						11:00	.0012	.2586	
						12 Mt	.0012	.2598	
						7-29-45			
			12 Mt			.0006		.2794	
						7-31-45			
						8:00p(e)	0	.2896	
Event of November 25-26, 1950									
10-28-50	.10	0	11-25-50	Raingage	R-5	11-25-50			
11-4	1.10	.0003	1:50a	0	.09 ^{1/}	3:10a	0	0	
11-5	0	.0003	2:00	.18	.12	6:25	.001	.0002	
11-11	.03 ^{2/}	0	:15	.08	.14	:30	.001	.0003	
11-20	.50	.0002	:26	.44	.22	:35	.003	.0005	
11-21	0	.0001	:35	.13	.24	:40	.009	.0010	
11-24	.05 ^{1/}	0	:51	.38	.34	:45	.013	.0019	
11-25	.04 ^{1/}	0	3:00	.20	.37	:50	.018	.0032	
			:43	.07	.42	:55	.027	.0051	
			4:00	.53	.57	7:00	.038	.0078	
Watershed Conditions: Heavily logged areas (1948-49) had much reduced canopy and second story of brush, laurel and young trees produced thickets on 90% of area, with litter disturbed somewhat, but generally good to excellent, with many logs still lying on area together with debris from topping operations; scattered areas where original stand was thinner were changed very little except where additional light from adjacent openings promoted second story growths 10%. In lower 300 feet of natural waterway debris and leaves were washed out of channel in numerous places.			:13	.09	.59	:04	.040	.0104	
			:33	.27	.68	:06	.042	.0118	
			:52	.47	.83	:08	.042	.0132	
			5:00	.45	.89	:12	.040	.0159	
			:56	.33	1.20	:20	.038	.0211	
			6:00	.30	1.22	:21	.081	.0221	
			:16	.45	1.34	:23	.084	.0249	
			:24	.23	1.37	:25	.098	.0279	
			:28	3.15	1.58	:26	.123	.0297	
			:35	1.11	1.71	:28	.116	.0337	
			:40	2.04	1.88	:30	.113	.0375	
			:58	1.40	2.30	:35	.113	.0469	
			7:00	.30	2.31	:45	.100	.0647	
			ceased			:55	.084	.0801	
			8:00	0	2.31	8:05	.071	.0930	
			:30	.02	2.32	:20	.060	.1093	
			:43e	.05	2.33	:40	.047	.1271	
						9:00	.038	.1413	
			11:33a	Snow	2.33	:20	.033	.1532	
			12 N	"	2.34	:40	.029	.1635	
Notes: To convert runoff in in/hr to cfs multiply by 12.15.									
1/ 9:30p, 11-24-50 to 1:10a, 11-25-50, rain continuing.									
2/ Included .02" snow.									

College Park, Maryland			Watershed W-9			(5.9)		12.05 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of November 25-26, 1950 Cont'd									
			12:50p (e)	Snow	2.36	10:20a	.023	.1807	
			4:00p	"	2.36	11:00	.018	.1944	
			5:00e	"	2.37	12 N	.014	.2103	
						1:00p	.011	.2227	
						2:00	.009	.2325	
			7:00p	"	2.37	3:00	.007	.2402	
			8:00e	"	2.38	4:00	.006	.2465	
						5:00	.005	.2518	
						7:00	.004	.2608	
						9:00	.003	.2680	
						12 Mt	.002	.2764	
						11-26-50			
						3:00a	.002	.2824	
						8:00	.001	.2884	
						1:00p	.001	.2919	
						12 Mt(e)	0	.2978	
Notes: To convert runoff in in/hr to cfs multiply by 12.15.									



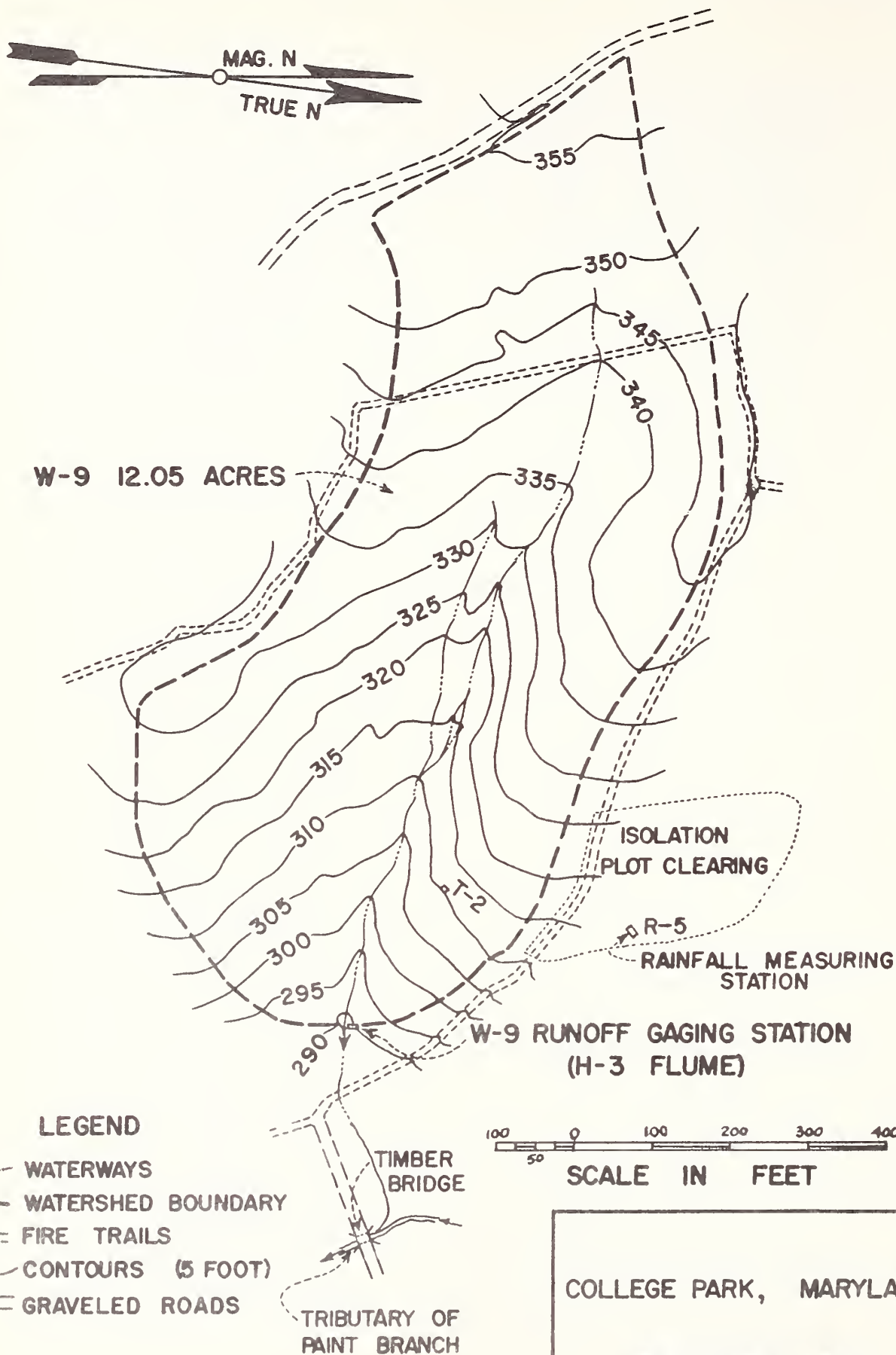
College Park, Maryland Watershed W-9 1943



College Park, Maryland

Watershed W-9

1945-50



Hagerstown, Maryland			Watershed W-11			(6.2)			80.8 acres		
Antecedent conditions			Rainfall			Runoff					
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Event of June 22-23, 1939											
5-23-39	0	.0060	6-22-39	Raingage	R-4	6-22-39					
5-24	0	.0048	3:45p	0	0	3:45p	.0002	0			
5-25	0	.0048	:50	.36	.03	:58	.0008	.0001			
5-26	0	.0048	:55	.96	.11	4:01	.0081	.0002			
5-27	.01	.0048	:57	2.10	.18	:02	.0117	.0004			
5-28	0	.0048	4:00	3.40	.35	:03	.0179	.0007			
5-29	0	.0048	:04	3.45	.58	:06	.0269	.0018			
5-30	0	.0048	:08	2.40	.74	:10	.0443	.0041			
5-31	0	.0048	:09	6.00	.84	:12	.0508	.0057			
6-1	.21	.0053	:14	1.68	.98	:13	.0653	.0067			
6-2	.81	.0183	:16	.60	1.00	:14	.1065	.0081			
6-3	0	.0084	:22	2.80	1.28	:16	.2250	.0136			
6-4	0	.0060	:25	3.80	1.47	:23	.2720	.0430			
6-5	0	.0048	:34e	.53	1.55	:24	.3070	.0478			
6-6	0	.0048				:25	.3580	.0533			
6-7	0	.0048	Raingage R-3		1.41						
6-8	0	.0036	Weighted average ^{1/}		1.51	:26	.4250	.0598			
6-9	0	.0024	8:13p	0	0	:27	.5040	.0675			
6-10	0	.0020	:18	3.72	.31	:29	.6060	.0861			
6-11	.30	.0031	:20	2.70	.40	:33	.5040	.1234			
			:20	2.70	.40	:34	.4610	.1314			
6-12	0	.0036	:22	3.30	.51	:37	.3880	.1526			
6-13	.43	.0046	:27	2.76	.74	:44	.2720	.1907			
6-14	0	.0036	:30	3.40	.91	:48	.2250	.2072			
6-15	0	.0024	:36	2.50	1.16	:50	.1880	.2141			
6-16	0	.0024	:42	.80	1.24	:55	.1410	.2279			
6-17	0	.0021	9:00	.07	1.26	5:00	.1065	.2382			
6-18	1.18	.0170	:13	.09	1.28	:07	.0735	.2486			
6-19	.71	.0309	:30e	.14	1.32	:13	.0560	.2551			
6-20	0	.0175				:20	.0443	.2610			
6-21	0	.0072	Raingage R-3		1.25	:30	.0369	.2677			
			Weighted average ^{1/}		1.30						
6-22	0	.0032 ^{2/}				:41	.0317	.2740			
						:55	.0269	.2809			
						6:15	.0216	.2890			
						:45	.0162	.2984			
						7:10	.0124	.3044			
						8:12	.0066	.3142			
						:15	.0237	.3150			
						:19	.0355	.3169			
						:21	.0578	.3185			
						:22	.0962	.3197			
						:23	.2250	.3224			
						:25	.4250	.3336			
						:28	.5330	.3576			
						:30	.6280	.3770			
						:34	.8660	.4272			
						:35	.9550	.4423			
						:38	1.0100	.4914			
						:40	.9060	.5234			
						:42	.8660	.5530			
						:44	.8860	.5823			
<p>Notes: To convert runoff in in/hr to cfs multiply by 81.47.</p> <p>1/ Thiessen method.</p> <p>2/ Prior to 3:45p.</p>											

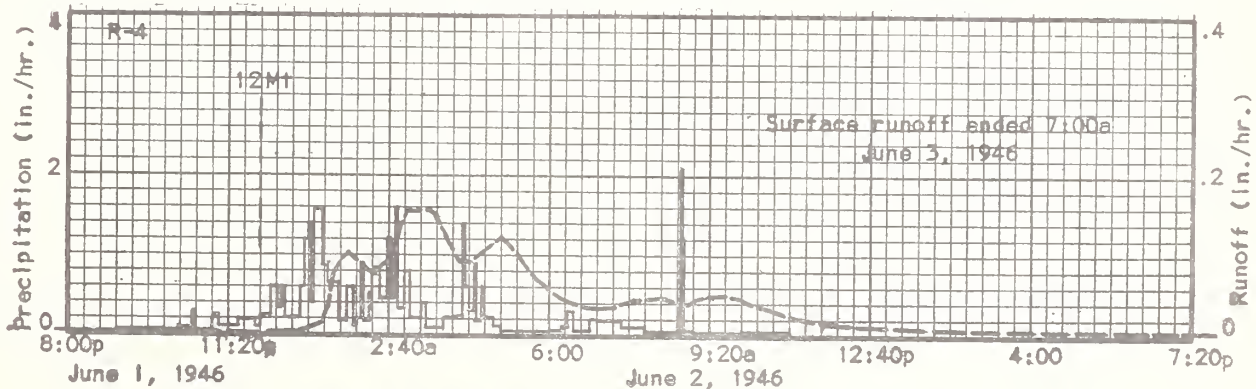
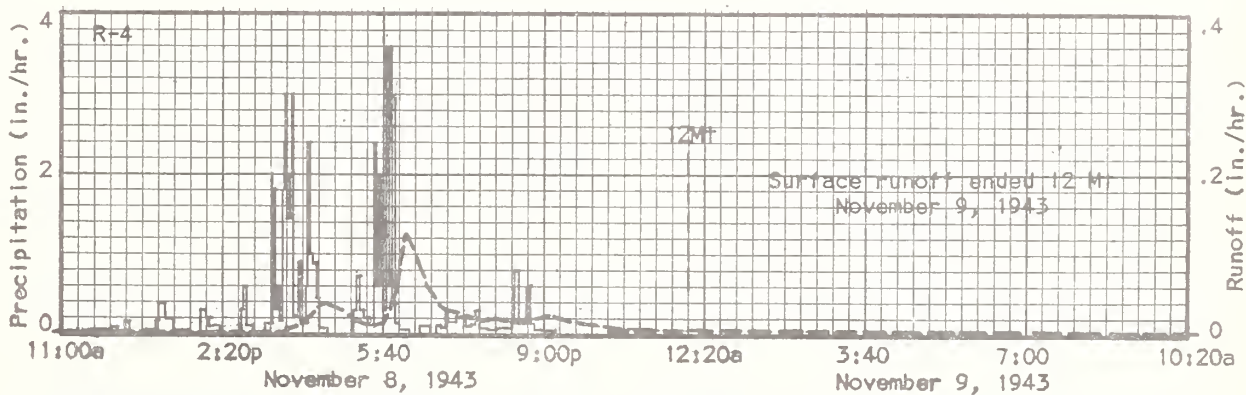
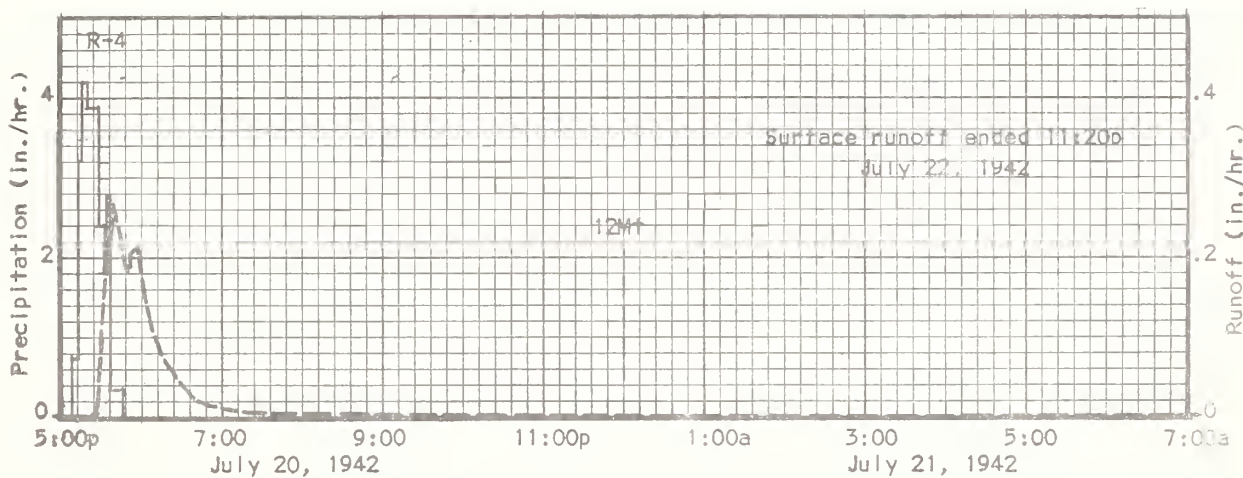
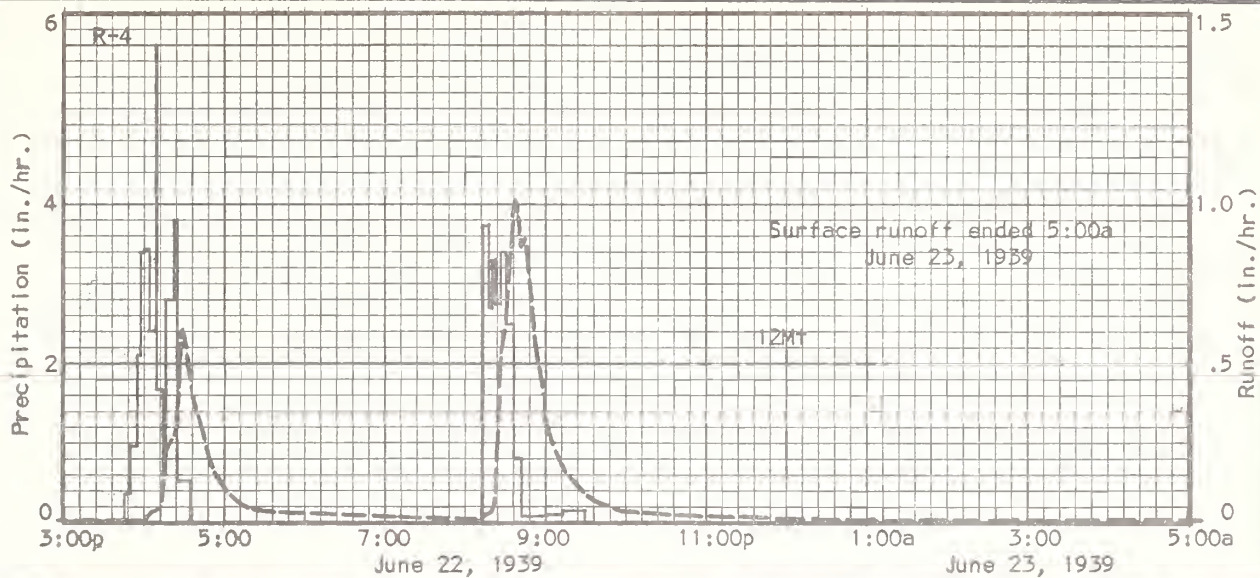
Hagerstown, Maryland			Watershed W-11			(6.2)		80.8 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of June 22-23, 1939 Cont'd									
						8:47p	.7820	.6240	
						:49	.7060	.6488	
						:50	.6630	.6602	
						:52	.5770	.6809	
						:57	.4250	.7225	
						9:00	.3460	.7418	
						:03	.2920	.7577	
						:07	.2250	.7750	
						:10	.1990	.7856	
						:15	.1610	.8006	
						:25	.1091	.8229	
						:32	.0869	.8343	
						:35	.0735	.8384	
						:45	.0524	.8488	
						:55	.0383	.8564	
						10:17	.0269	.8683	
						:40	.0206	.8775	
						11:03	.0162	.8845	
						:33	.0117	.8915	
						12 Mt	.0092	.8962	
						6-23-39			
						2:00a	.0045	.9100	
						4:00	.0019	.9161	
						5:00e	.0016	.9179	
Event of July 20-22, 1942									
6-20-42	0	.0042	7-20-42	Raingage	R-4	7-20-42			
6-21	0	.0039	5:08p	0	0	5:12p	.0001	0	
6-22	1.10	.0104	:13	.72	.06	:22	.0007	.0001	
6-23	.14	.0128	:16	3.20	.22	:24	.0016	.0001	
6-24	0	.0043	:19	4.20	.43	:25	.0045	.0001	
6-25	.01	.0034	:28	3.87	1.01	:27	.0155	.0005	
6-26	.75	.0101	:31	2.40	1.13	:28	.0247	.0008	
6-27	.12	.0110	:33	1.80	1.19	:29	.0443	.0014	
6-28	.03	.0062	:36	2.80	1.33	:31	.141	.0045	
6-29	0	.0040	:45	.33	1.38	:33	.188	.0100	
6-30	0	.0030	Raingage	R-3	1.46	:35	.213	.0167	
7-1	.07	.0029	Weighted	average ^{1/}	1.40	:37	.248	.0243	
7-2	.03	.0032				:38	.267	.0286	
7-3	0	.0020				:40	.248	.0372	
7-4	0	.0018				:44	.229	.0531	
7-5	0	.0015				:48	.188	.0672	
7-6	0	.0014				:50	.180	.0733	
7-7	0	.0013				:52	.206	.0798	
7-8	0	.0014				:56	.213	.0943	
7-9	0	.0014				6:00	.174	.1081	
7-10	1.68	.0439				:04	.135	.1175	
7-11	0	.0111				:06	.124	.1218	
7-12	0	.0033				:08	.1065	.1257	
7-13	0	.0019				:15	.0778	.1363	
7-14	0	.0017				:20	.0615	.1421	
Notes: To convert runoff in in/hr to cfs multiply by 81.47.									
^{1/} Thiessen method.									

Hagerstown, Maryland			Watershed W-11			(6.2)	80.8 acres	
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 20-22, 1942 Cont'd								
7-15-42	0	.0013				6:25p	.0508	.1468
7-16	0	.0014				:35	.0292	.1533
7-17	0	.0011				:45	.0188	.1574
7-18	.45	.0024				:55	.0124	.1600
7-19	0	.0012				7:00	.0098	.1609
7-20	0	.0006 ^{1/}				:05	.0086	.1617
						:10	.0061	.1623
						:20	.0045	.1632
						:45	.0026	.1645
						8:20	.0016	.1657
						:50	.0013	.1665
						9:40	.0010	.1674
						10:40	.0008	.1683
						12 Mt	.0007	.1693
						7-21-42		
						1:00a	.0006	.1700
						3:00	.0005	.1711
						6:00	.0004	.1724
						11:00	.0003	.1742
						1:00p	.0002	.1747
						7-22-42		
						11:00a	.0002	.1791
						1:00p	.0001	.1794
						11:20a	.0001	.1803
Event of November 8-9, 1943								
10-14-43	.64	0	11-8-43	Raingage	R-4	11-8-43		
10-15	.28	0	11:25a	0	0	1:40p	.0006	0
10-16	.31	.0001	12 N	.02	.01	2:18	.0007	.0004
10-18	.04	0	12:09p	.07	.02	:56	.0010	.0010
10-24	.04	0	ceased			3:17	.0010	.0013
10-25	.32	T	:18	0	.02	:30	.0013	.0015
10-26	.86	.0100	:26	.15	.04	:37	.0016	.0017
10-27	0	.0033	ceased			:40	.0023	.0018
10-28	.60	.0041	:45	0	.04	:43	.0038	.0020
10-29	0	.0010	:56	.05	.05	:49	.0061	.0025
10-30	0	.0001	1:00	.15	.06	:52	.0092	.0028
10-31	0	.0001	:08	.38	.11	:55	.0117	.0034
11-1	0	T	:18	.18	.14	:58	.0162	.0041
11-2	1.02	.0064	:37	.03	.15	4:02	.0198	.0053
11-3	.08	.0062	ceased			:11	.0216	.0084
11-4	0	.0002	:52	0	.15	:15	.0258	.0099
11-5	0	.0002	2:00	.30	.19	:18	.0317	.0114
11-6	0	.0001	:03	.20	.20	:27	.0383	.0166
11-7	0	.0001	:10	.09	.21	:38	.0330	.0232
11-8	.30 ^{2/}	.0045 ^{3/}	:16	.10	.22	:49	.0281	.0288
			ceased					
			:42	0	.22	:57	.0226	.0322
			:44	.30	.23	5:08	.0162	.0357
			:49	.60	.28	:30	.0098	.0405
			:56	.09	.29	:39	.0117	.0421
			ceased			:43	.0162	.0430
Notes: To convert runoff in in/hr to cfs multiply by 81.47.								
1/ Prior to 5:12p.								
2/ 2:30a to 9:50a.								
3/ Prior to 1:40p.								

Hagerstown, Maryland			Watershed W-11			(6.2)		80.8 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of November 8-9, 1943 Cont'd									
1									
Watershed Conditions: Wheat			3:13p	0	.29	5:47p	.0258	.0444	
newly seeded 2 to 3 inches high			:22	.13	.31	:49	.0317	.0454	
26%; pastured hay 3-6 inches			:24	1.80*	.37	:51	.0383	.0466	
high 34%; mixed hay 6-8 inches			:28	.30	.39	:53	.0474	.0480	
high 39%; old orchard 1%.			:30	.60	.41	:55	.0542	.0497	
			:34	.15	.42	:57	.0634	.0516	
			:35	1.80	.45	:59	.0735	.0539	
			:37	2.40	.53	6:01	.0847	.0566	
			:39	3.00	.63	:03	.0962	.0596	
			:44	1.44	.75	:05	.1091	.0630	
			:47	2.00	.85	:09	.1240	.0708	
			:49	3:00	.95	:21	.0962	.0928	
			:54	.24	.97	:25	.0847	.0988	
			:56	.90	1.00	:29	.0735	.1041	
			4:00	.15	1.01	:33	.0634	.1087	
			:05	.12	1.02	:39	.0542	.1145	
			:07	.60	1.04	:43	.0459	.1179	
			:09	2.40	1.12	:50	.0383	.1228	
			:12	1.00	1.17	7:00	.0304	.1285	
			:16	.90	1.23	:13	.0237	.1344	
			:20	.45	1.26	:26	.0198	.1391	
			:30	.06	1.27	:40	.0179	.1435	
			ceased			8:00	.0188	.1496	
			5:03	0	1.27	:30	.0146	.1579	
			:07	.30	1.29	:42	.0188	.1613	
			:12	.72	1.35	9:12	.0206	.1711	
			:16	.30	1.37	:20	.0198	.1738	
			:22	.20	1.39	:40	.0146	.1796	
			:28	.10	1.40	10:00	.0117	.1839	
			:30	2.40	1.48	:20	.0086	.1873	
			:33	.60	1.51	:40	.0070	.1899	
			:36	2:00	1.61	11:04	.0061	.1925	
			:37	.60	1.62	:30	.0061	.1952	
			:40	1.60	1.70	12 Mt	.0057	.1981	
			:42	.30	1.71	11-9-43			
			:43	3.60	1.77	12:44a	.0045	.2019	
			:46	.60	1.80	2:02	.0032	.2069	
			:49	3.60	1.98	3:04	.0026	.2099	
			:54	.36	2.01	4:24	.0021	.2130	
			:55	3.00	2.06	6:30	.0016	.2169	
			6:00	.12	2.07	2:00p	.0010	.2266	
			:12	.05	2.08	7:00	.0007	.2309	
			ceased			12 Mt(e)	.0007	.2344	
			:26	0	2.08				
			:38	.10	2.10				
			ceased						
			:46	0	2.10				
			:51	.12	2.11				
			:58	.09	2.12				
Notes: To convert runoff in in/hr to cfs multiply by 81.47.									

Hagerstown, Maryland			Watershed W-11			(6.2)		80.8 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of November 8-9, 1943 Cont'd									
			7:00p	.30	2.13				
			:12	.15	2.16				
			:23	.22	2.20				
			:30	.09	2.21				
			:35	.12	2.22				
			:41	.30	2.25				
			:50	.07	2.26				
			8:00	.06	2.27				
			:20	.09	2.30				
			:24	.15	2.31				
			:30	.80	2.39				
			:39	.13	2.41				
			:42	.60	2.44				
			:47	.12	2.45				
			9:00	.05	2.46				
			:15e	.04	2.47				
			Raingage	R-3	2.70				
			Weighted	average ^{1/}	2.54				
			10:20p	0	0				
			:45	.02	.01				
			11:15	.04	.03				
			ceased						
			12 Mt	0	.03				
			11-9-43						
			12:15ae)	.04	.04				
			Raingage	R-3	.01				
			Weighted	average ^{1/}	.03				
Event of June 1-3, 1946									
5-2-46	0	.0048	6-1-46	Raingage	R-4	6-1-46			
5-3	0	.0048	9:00p	0	0	9:00p	.0007	0	
5-4	.59	.0135	10:00	.05	.05	10:40	.0007	.0012	
5-5	.02	.0112	:18	.03	.06	11:20	.0010	.0017	
5-6	0	.0018	:37	.06	.08	12 Mt	.0016	.0026	
5-7	.46	.0096	:39	.30	.09	6-2-46			
5-8	0	.0055	11:00	.03	.10	12:24a	.0026	.0035	
5-9	0	.0024	.03	.20	.11	:40	.0045	.0044	
5-10	0	.0024	:08	.24	.13	1:00	.0081	.0065	
5-11	.13	.0026	:34	.09	.17	:16	.0162	.0097	
5-12	.67	.0264	:53	.19	.23	:20	.0258	.0111	
5-13	0	.0067	12 Mt	.09	.24	:24	.0383	.0133	
5-14	.39	.0091	6-2-46			:28	.0542	.0164	
5-15	0	.0058	:13	.23	.29	:32	.0735	.0206	
5-16	.05	.0036	:21	.60	.37	:40	.0914	.0316	
5-17	.58	.0192	:25	.30	.39	:52	.1065	.0514	
5-18	.37	.0226	:30	.60	.44	2:08	.0869	.0772	
5-19	0	.0087	:50	.21	.51	:20	.0778	.0936	
5-20	.60	.0138	:55	.60	.56	:40	.0939	.1223	
5-21	.06	.0244	1:00	1.20	.66	:48	.1120	.1360	
Notes: To convert runoff in in/hr to cfs multiply by 81.47. 1/ Thiessen method.									

Hagerstown, Maryland			Watershed W-II			(6.2)		80.8 acres	
Antecedent conditions			Rainfall			Runoff			
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Event of June 1-3, 1946 Cont'd									
5-22-46	0	.0055	1:03	1.40	.73	2:56a	.1410	.1529	
5-23	0	.0032	:05	.40	.75	3:04	.1670	.1734	
5-24	0	.0024	:17	1.58	1.04	:20	.1800	.2197	
5-25	.02	.0024	:24	.86	1.14	:32	.1670	.2544	
5-26	.41	.0035	:37	.65	1.28	:40	.1510	.2756	
5-27	1.48	.1466	:48	.16	1.31	:52	.1240	.3031	
5-28	.05	.0328	:54	.60	1.37	4:00	.1039	.3183	
5-29	0	.0265	2:00	.10	1.38	:12	.0914	.3378	
5-30	0	.0228	:06	.20	1.40	:24	.0914	.3561	
5-31	0	.0181	:08	.90	1.43	:40	.1039	.3821	
6-1	.09 ^{1/}	.0131 ^{2/}	:16	.53	1.50	5:00	.1210	.4196	
			:18	.30	1.51	:20	.1012	.4567	
			:25	.77	1.60	:40	.0757	.4861	
			:30	.84	1.67	6:00	.0560	.5081	
			:38	.45	1.73	:20	.0427	.5246	
Watershed Conditions: Corn, check rowed generally off contour 3-6 inches high 23%; winter wheat 24 inches high, 13%; old orchard 1%; mixed hay 12 to 18 inches tall 63%.			:42	1.20	1.81	:44	.0355	.5402	
			:46	.45	1.84	7:00	.0342	.5495	
			:49	1.60	1.92	:24	.0355	.5634	
			3:00	.33	1.98	:44	.0412	.5762	
			:06	.80	2.06	8:20	.0459	.6023	
			:20	.21	2.11	:48	.0398	.6223	
			:26	.40	2.15	9:04	.0443	.6335	
			:49	.08	2.18	:20	.0491	.6460	
			4:00	.22	2.22	:40	.0491	.6624	
			:13	.23	2.27	10:00	.0443	.6779	
			:16	1.40	2.34	:20	.0355	.6912	
			:20	.60	2.38	:40	.0304	.7022	
			:26	.30	2.41	11:00	.0247	.7114	
			:28	.90	2.44	:40	.0162	.7250	
			:35	.17	2.46	12 N	.0139	.7301	
			:39	.60	2.50	1:00p	.0104	.7422	
			:50	.22	2.54	:40	.0092	.7487	
			5:00	.12	2.56	2:40	.0081	.7574	
			6:00	.03	2.59	4:00	.0070	.7675	
			:16	.04	2.60	6:00	.0061	.7806	
			:23	.09	2.61	8:00	.0057	.7924	
			:31	.30	2.65	12 Mt	.0057	.8152	
			:51	.03	2.66	6-3-46			
			7:00	.20	2.69	7:00a(e)	.0057	.8549	
			:30	.18	2.78				
			8:00	.10	2.83				
			:45	.03	2.85				
			:47	2.10	2.92				
			:48	1.20	2.94				
			9:00	.05	2.95				
			10:00	.01	2.96				
			11:00e	.02	2.98				
			Raingage	R-3	3.03				
			Weighted	average ^{3/}	3.00				
Notes: To convert runoff in in/hr to cfs multiply by 81.47.									
1/ 2:50p to 5:00p.									
2/ Prior to 9:00p.									
3/ Thiessen method.									



Hagerstown, Maryland Watershed W-11 1939-46



PUBLIC SCHOOL

RAINFALL MEASURING STATION

R-4

W-II 80.8 ACRES

WATERSHED W-III
(ADJACENT)

MEADOW OUTLET

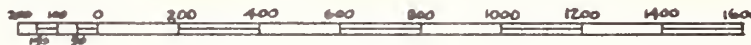
RAINFALL MEASURING
STATION

R-3

W-II RUNOFF GAGING STATION
(3:1 WEIR)

LEGEND

- WATERSHED BOUNDARY
- WATERWAY
- DIVERSION TERRACE
- 650 — CONTOURS
- STRIP OR FIELD BOUNDARIES
- x-x- FENCES
- ROCK OUTCROPS
- == HIGHWAY



SCALE IN FEET

CONTOUR INTERVAL 10 FT.

HAGERSTOWN, MARYLAND

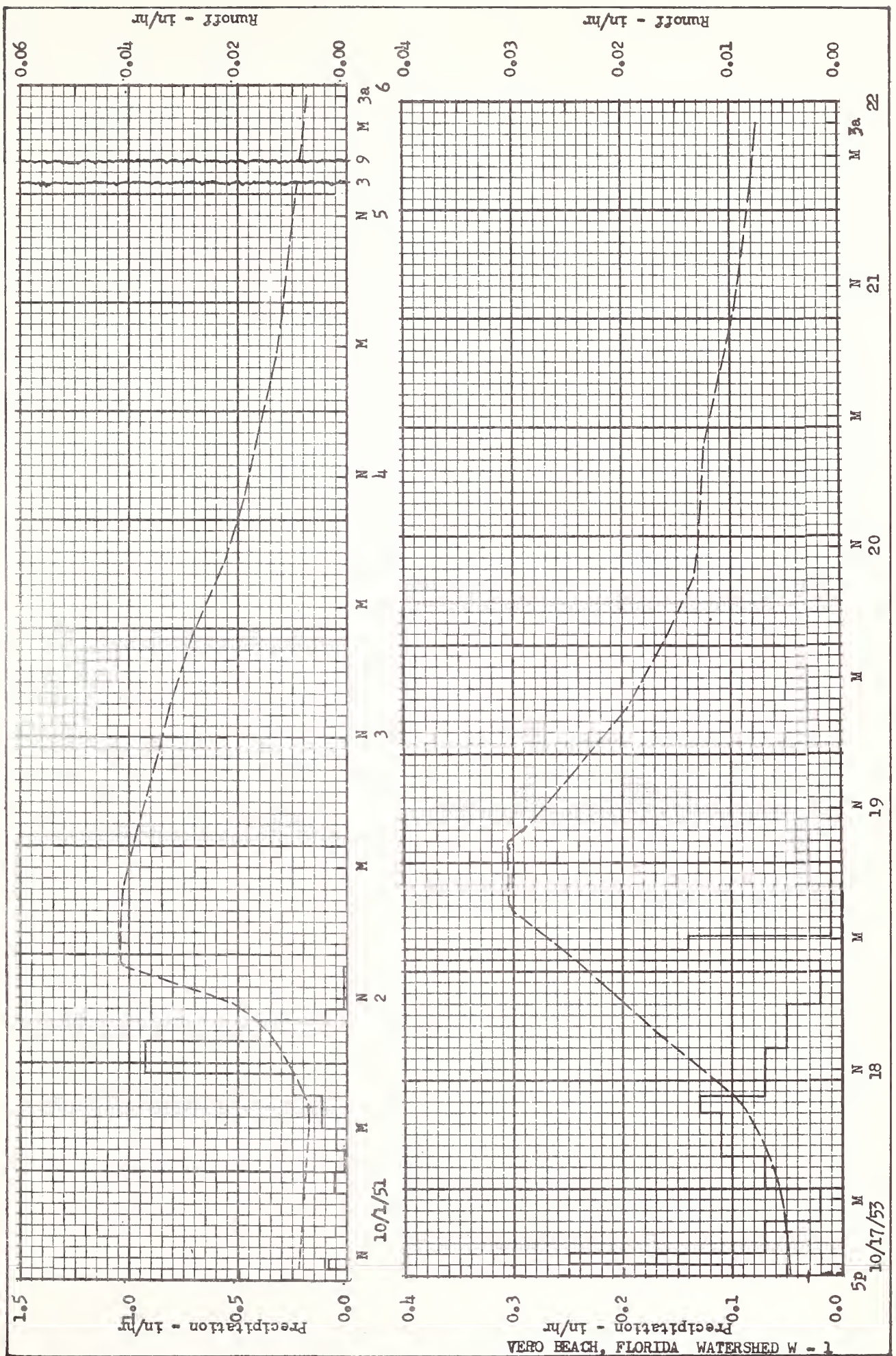
WATERSHED W-II

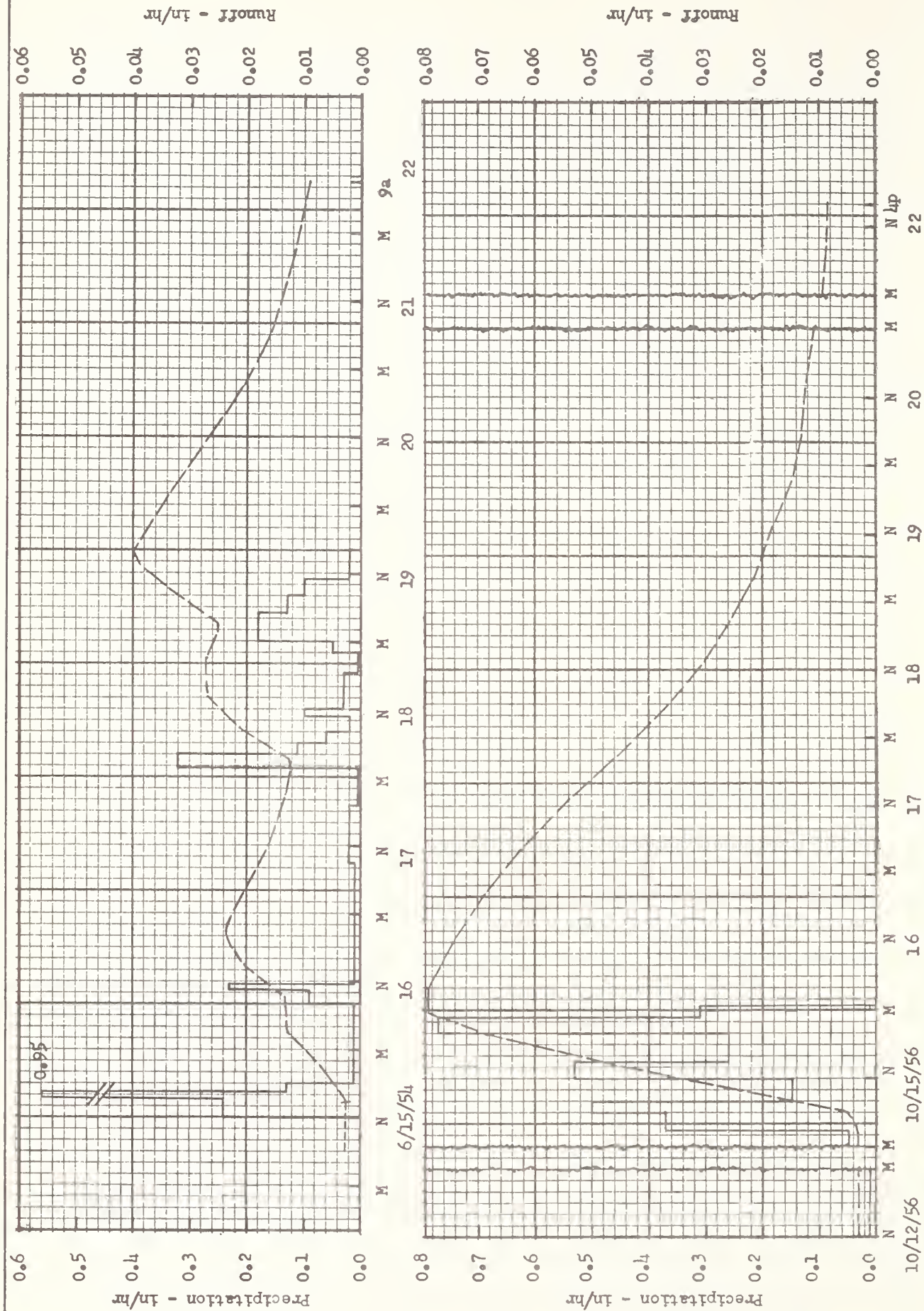
Vero Beach, Florida			Watershed W-1 (8.1)			Area - 49,915 Acres		
Antecedent conditions			Rainfall			Runoff ^{1/}		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of October 1, 1951								
			10-1-51			10-2-51		
9-2-51	0.03	0.0320	11:00 A	0	0	2:00 A	0.0070	0
9-3	.38	.0320	12:00 N	.08	.08	10:00	.0167	.0944
9-4	.09	.0330	6:00 P	.00	.10	12:00 N	.0238	.1348
9-5	.10	.0330	8:00	.06	.22	3:00 P	.0413	.2326
9-6	.01	.0320	10:00	.01	.24	5:00	.0419	.3158
9-7	.72	.0310	12:00 M	.05	.35	9:00	.0414	.4826
9-8	.01	.0330	10-2-51			10-3-51		
9-9		.0300	3:00 A	.12	.70	3:00 A	.0385	.7226
9-10		.0270	5:00	.25	1.20	9:00	.0355	.9446
9-11		.0260	8:00	.93	4.00	3:00 P	.0324	1.149
9-12	.01	.0240	10:00	.40	4.80	9:00	.0282	1.330
9-13		.0230	11:00	.10	4.90	10-4-51		
9-14	.02	.0240	3:00 P	.01	4.93	3:00 A	.0234	1.485
9-15	.03	.0250				9:00	.0196	1.614
9-16	.02	.0290				3:00 P	.0163	1.722
9-17	.08	.0300				9:00	.0139	1.813
9-18	.08	.0300				10-5-51		
9-19	.07	.0290				3:00 A	.0119	1.890
9-20		.0290				9:00	.0102	1.956
9-21	.07	.0270				3:00 P	.0091	2.014
9-22	.03	.0260				9:00	.0083	2.066
9-23		.0240				10-6-51		
9-24		.0270				3:00 A	.0076	2.114
9-25	.10	.0270						
9-26		.0240						
9-27	.19	.0260						
9-28	.76	.0300						
9-29	2.20	.0580						
9-30	.93	.3130						
10-1	.02*	.2020						
<p><u>Watershed Conditions:</u></p> <p>Approximate land use, (from SCS)</p> <p>8,000 Acres in Citrus Groves</p> <p>2,000 Acres in Improved Pasture</p> <p>32,000 Acres in Range & Forest</p> <p>8,000 Acres in misc. use</p> <p>(Roads, Canals, Towns, etc.)</p> <p>* Rainfall to 8:00 A.M.</p>								
<p>Runoff is graphical sum of discharge from 3 outlet canals</p>								
<p>Notes: To convert runoff in in/hr to cfs, multiply by 50,332. ^{1/} Base flow included in storm runoff.</p> <p>All rainfall Thiessen weighted average (4 gages)</p>								

Vero Beach, Florida Watershed W-1			(8.1)			Area - 49,915 Acres		
Antecedent conditions			Rainfall			Runoff <u>1/</u>		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of October 17, 1953								
9-17-53	1.32	0.3910	10-17-53			10-17-53		
9-18	3.44	.4950	5:00 P	0	0	9:00 P	0.0050	0
9-19	.02	.7250	6:00	.10	.10	10-18-53		
9-20		.5240	7:00	.25	.35	3:00 A	.0064	.0342
9-21	.03	.3180	10:00	.07	.55	9:00	.0093	.0810
			10-18-53			3:00 P	.0163	.1578
9-22	.17	.2050	1:00 A	.02	.60	9:00	.0230	.2754
9-23	.11	.1780	4:00	.07	.80	10-19-53		
9-24	.01	.1470	8:00	.11	1.25	3:00 A	.0302	.4350
9-25	.03	.1150	9:30	.13	1.45	9:00	.0306	.6174
9-26	.64	.1040	2:00 P	.07	1.75	3:00 P	.0248	.7836
9-27	.21	.1370	6:00	.05	1.95	9:00	.0198	.9174
9-28	.01	.1430	10:00	.02	2.05	10-20-53		
9-29	.41	.1270	11:00	.40	2.45	3:00 A	.0163	1.025
9-30	.16	.2140	10-19-53			9:00	.0135	1.115
10-1		.1670	12:15 A	.14	2.62	3:00 P	.0129	1.194
10-2	.18	.1380	7:00 Ae	.01	2.70	9:00	.0127	1.271
10-3	1.15	.2020				10-21-53		
10-4	.82	.4270				3:00 A	.0111	1.342
10-5		.3980				9:00	.0099	1.405
10-6		.2400				3:00 P	.0089	1.462
10-7	.68	.2940				9:00	.0081	1.513
10-8	2.38	.6110				10-22-53		
10-9	1.57	1.0900				3:00 Ae	.0076	1.559
10-10		.8750						
10-11		.4520						
10-12		.2610						
10-13		.1910						
10-14	.08	.1570						
10-15	.10	.1380						
10-16	.01	.1270						
10-17		.1006 *						
<p><u>Watershed Conditions:</u></p> <p>Approximate land use, (from SCS)</p> <p>9,500 Acres in Citrus Groves</p> <p>3,000 Acres in Improved Pasture</p> <p>29,300 Acres in Range & Forest</p> <p>8,200 Acres in Misc. use</p> <p>(Roads, Canals, Towns, etc.)</p> <p>* Runoff to 9:00 P.M.</p>								
<p>Runoff is graphical sum of discharge from 3 outlet canals</p>								
<p>Notes: To convert runoff in in/hr to cfs, multiply by 50,332. <u>1/</u> Base flow included in storm runoff.</p> <p>All rainfall Thiessen weighted average (4 gages)</p>								

Vero Beach, Florida Watershed W-1			(8.1)			Area - 49,915 Acres		
Antecedent conditions			Rainfall			Runoff $\frac{1}{2}$		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of June 15, 1954								
			6-15-54			6-15-54		
5-15-54	0.43	0.0320	12:00 N	0	0	3:00 P	0.0022	0
5-16		.0320	3:30 P	.24	.85	9:00	.0068	.0270
5-17	.01	.0310	4:30	.95	1.80	6-16-54		
5-18		.0290	6:00	.13	2.00	3:00 A	.0127	.0858
5-19		.0270	6-16-54			9:00	.0131	.1632
5-20	.58	.0280	8:00 A	.01	2.10	3:00 P	.0201	.2628
5-21		.0290	10:30	.09	2.32	9:00	.0236	.3936
5-22	.01	.0270	11:30	.23	2.55	6-17-54		
5-23		.0250	6-17-54			3:00 A	.0209	.5268
5-24		.0240	9:00 A	.01	2.65	9:00	.0179	.6432
5-25		.0280	7:00 P	.02	2.80	3:00 P	.0151	.7422
5-26	.57	.0260	6-18-54			9:00	.0133	.8274
5-27	1.11	.0400	1:30 A	T	2.80	6-18-54		
5-28		.0530	4:00	.32	3.60	3:00 A	.0121	.9036
5-29	.97	.0460	6:00	.11	3.82	9:00	.0211	1.003
5-30	.40	.0920	8:00	.06	3.95	3:00 P	.0267	1.147
5-31		.1000	11:00	.02	4.00	9:00	.0267	1.307
6-1	.70	.0760	12:00 N	.10	4.10	6-19-54		
6-2	.49	.0810	6:30 P	.03	4.30	3:00 A	.0250	1.462
6-3	.94	.1060	10:00	T	4.30	9:00	.0334	1.637
6-4	.72	.1820	12:00 M	.05	4.40	3:00 P	.0399	1.856
6-5	.73	.2200	6-19-54			9:00	.0366	2.086
6-6	.50	.2700	5:00 A	.18	5.30	6-20-54		
6-7		.1770	8:00	.13	5.70	3:00 A	.0330	2.294
6-8		.1210	11:00	.10	6.00	9:00	.0288	2.480
6-9		.0940	4:00 Pe	.02	6.11	3:00 P	.0247	2.641
6-10		.0780				9:00	.0208	2.777
6-11		.0660				6-21-54		
6-12		.0580				3:00 A	.0175	2.893
6-13	.06	.0530				9:00	.0149	2.990
6-14		.0610				3:00 P	.0133	3.074
6-15		.0512 *				9:00	.0117	3.149
						6-22-54		
						3:00 A	.0103	3.215
						9:00Ae	.0093	3.274
<p><u>Watershed Conditions:</u></p> <p>Approximate land use, (from SCS) 10,250 Acres in Citrus Groves 3,500 Acres in Improved Pasture 27,500 Acres of Range and Forest 8,500 Acres in miscellaneous use (Roads, Canals, Towns, etc.)</p> <p>* Runoff to 3:00 PM</p>								
Notes: To convert runoff in in/hr to cfs, multiply by 50,332. All rainfall Thiessen weighted average (4 gages)						$\frac{1}{2}$ Base flow included in storm runoff.		

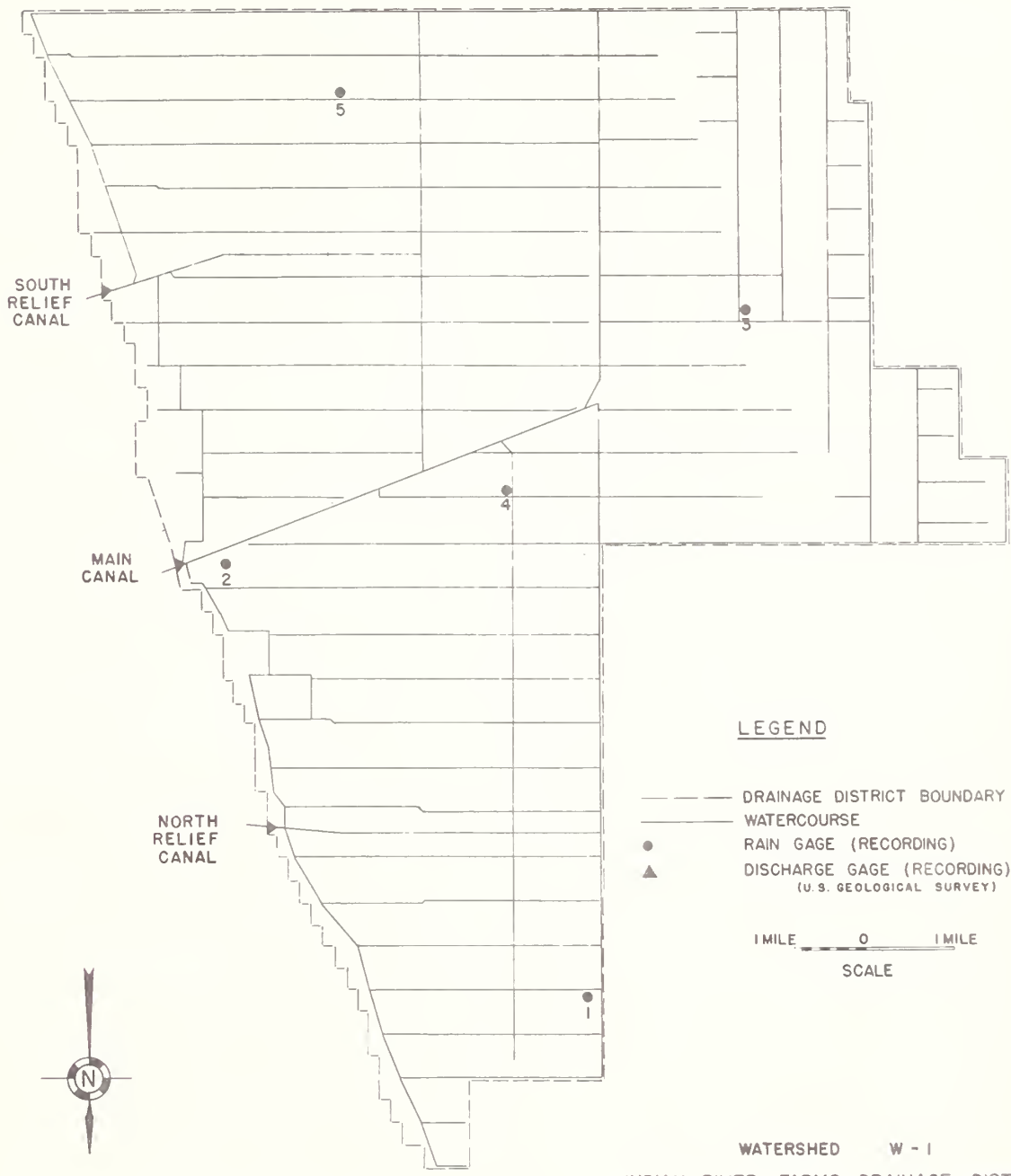
Vero Beach, Florida Watershed W - 1			(8.1)			Area - 49,915 Acres		
Antecedent conditions			Rainfall			Runoff ^{1/}		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of October 15, 1956								
			10-12-56			10-12-56		
9-12-56		0.1940	12:00 M	0.	0.	12:00 M	0.0032	0
9-13		.1360	10-14-56			10-15-56		
9-14		.1090	12:00 M	.01	.55	2:00 A	.0035	.2108
9-15		.0910	10-15-56			5:00	.0040	.2222
9-16		.0790	3:00 A	.05	.70	6:00	.0050	.2267
9-17	0.45	.0780	6:00	.37	1.80	2:00 P	.0447	.4251
9-18	.90	.0950	8:00	.50	2.80	8:00	.0676	.7617
9-19		.1590	12:00 M	.15	3.40	12:00 M	.0793	1.055
9-20		.1170	3:00 P	.53	5.00	10-16-56		
9-21		.0930	8:00	.26	6.30	2:00 A	.0797	1.214
9-22		.0800	11:00	.77	8.60	4:00	.0793	1.373
9-23		.0720	10-16-56			12:00 M	.0745	1.988
9-24		.0660	1:00 A	.31	9.23	8:00 P	.0692	2.563
9-25		.0620				10-17-56		
9-26		.0580				4:00 A	.0626	3.090
9-27		.0550				12:00 M	.0553	3.562
9-28	.71	.0400				8:00 P	.0462	3.968
9-29		.0830				10-18-56		
9-30		.0630				4:00 A	.0382	4.306
10-1		.0420				12:00 M	.0316	4.585
10-2		.0220				8:00 P	.0260	4.816
10-3	.13	.0210				10-19-56		
10-4	2.65	.2260				4:00 A	.0217	5.006
10-5	.62	.4860				12:00 M	.0182	5.166
10-6	.03	.3230				8:00 P	.0153	5.300
10-7	.07	.1830				10-20-56		
10-8		.1300				4:00 A	.0134	5.416
10-9		.1030				12:00 M	.0123	5.518
10-10	.04	.0870				12:00 M	.0109	5.657
10-11		.0740				10-21-56		
10-12		.0325 *				12:00 M	.0093	5.900
						10-22-56		
						8:00 A	.0089	5.972
						4:00 P	.0084	6.041
<p><u>Watershed Conditions:</u></p> <p>Approximate land use, (from SCS) 12,000 Acres in Citrus Groves 4,500 Acres in Improved Pasture 24,100 Acres of Range and Forest 9,400 Acres in miscellaneous use (Roads, Canals, Towns, etc.)</p> <p>* Runoff to 12:00 M</p>								
<p>Notes: To convert runoff in in/hr to cfs, multiply by 50,332. All rainfall Thiessen weighted average (5 gages)</p>						<p>^{1/} Base flow included in storm runoff.</p>		





VERO BEACH, FLORIDA, WATERSHED W - 1

Sheet 6 of 11

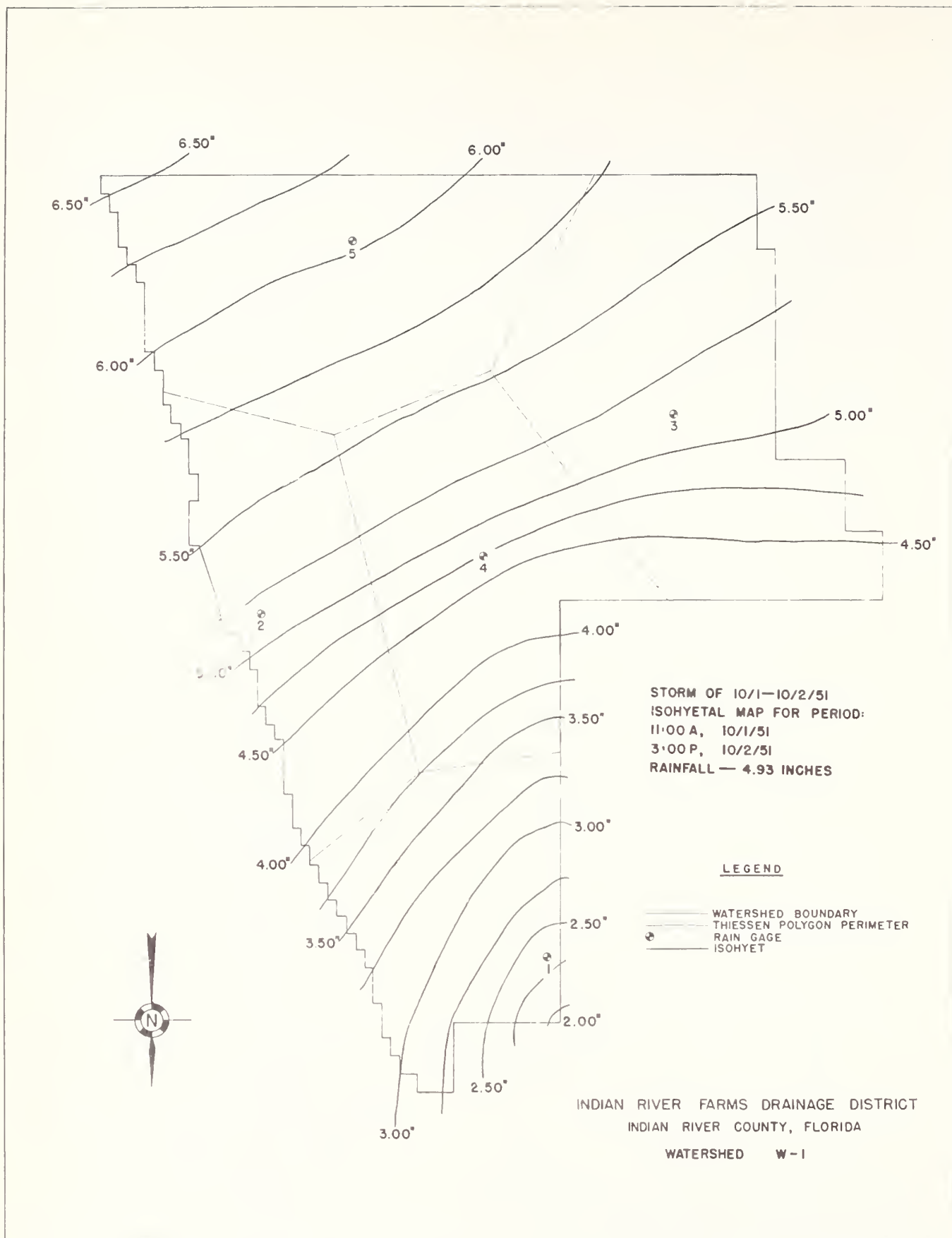


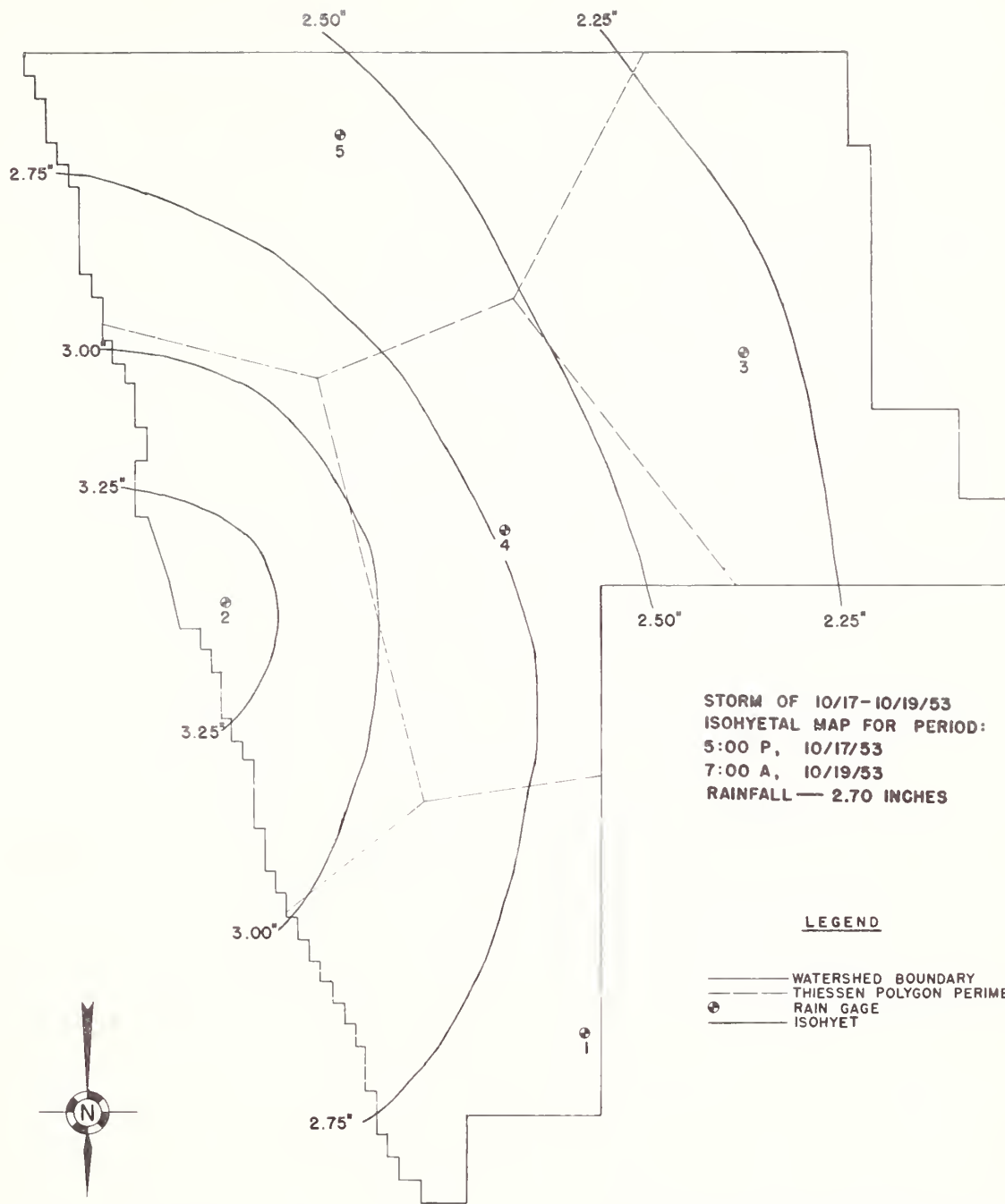
LEGEND

- DRAINAGE DISTRICT BOUNDARY
- WATERCOURSE
- RAIN GAGE (RECORDING)
- ▲ DISCHARGE GAGE (RECORDING)
(U.S. GEOLOGICAL SURVEY)

1 MILE 0 1 MILE
SCALE

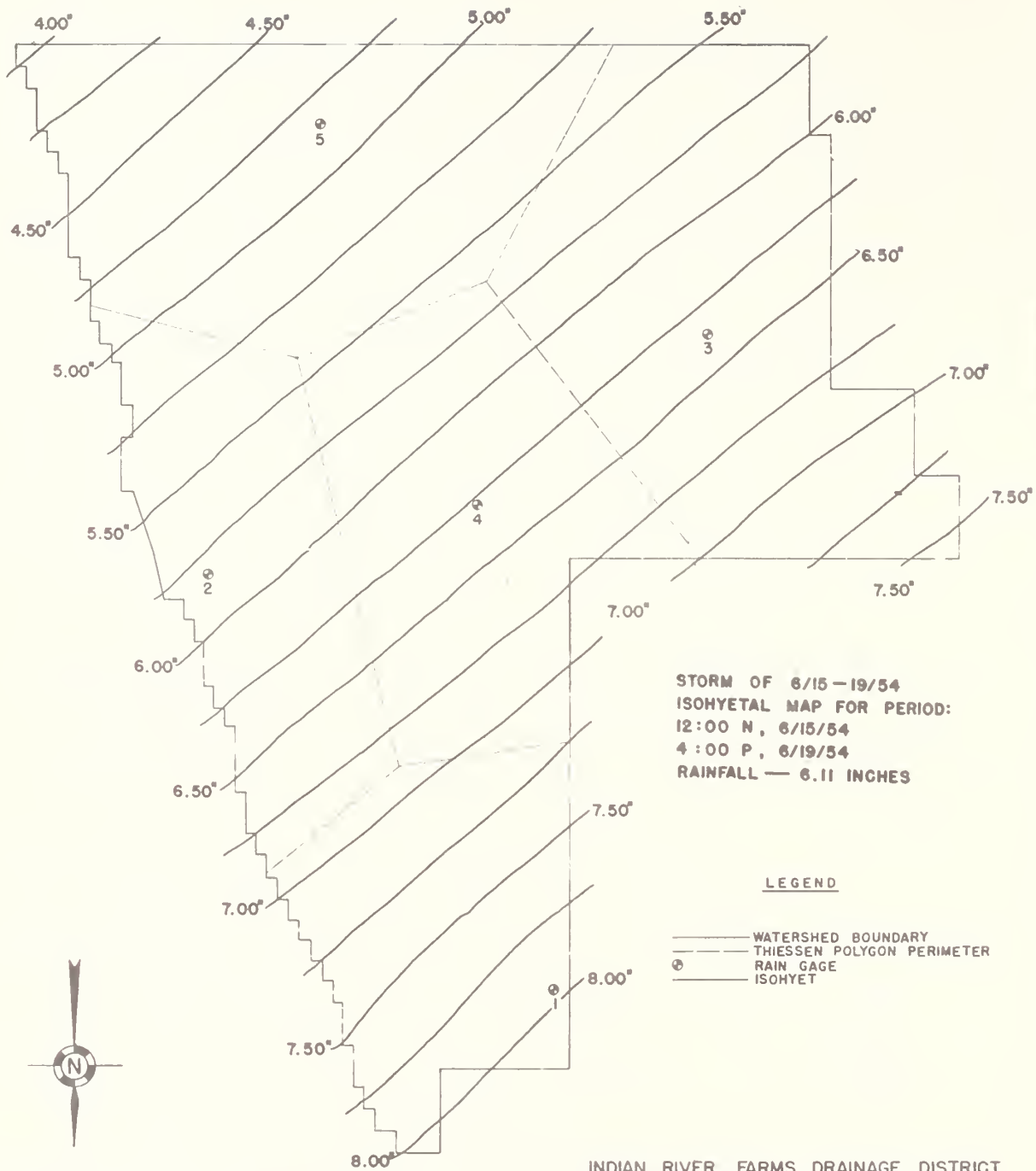
WATERSHED W - 1
INDIAN RIVER FARMS DRAINAGE DISTRICT
INDIAN RIVER COUNTY, FLORIDA
TOTAL AREA—49,915 ACRES





INDIAN RIVER FARMS DRAINAGE DISTRICT
 INDIAN RIVER COUNTY, FLORIDA
 WATERSHED W-1

SHEET 9 OF 11



SHEET 10 OF 11

Americus Georgia			Watershed W-IV			(9.4)	Area - 59.2 acres	
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of December 26, 1941								
12-3-41	1.12	0	12-25-41	Raingages	R-5, R-6 ^{1/}	12-26-41		
12-4	1.56	.098	11:46p	0	0	12:01a	0	0
12-11	.08	0	:48	.30	.01	:11	.0001	T
12-12	.18	0	:58	.12	.03	:24	.0098	.001
12-13	.22	0	12:00m	1.80	.09	:26	.0259	.002
12-22	.53	0	12-26-41			:29	.0472	.004
12-23	3.72	.475	12:06a	.30	.12	:35	.272	.020
12-25	.60	.022	:08	.60	.14	:40	.291	.043
Watershed Conditions: 84% in oats, 2" high, very light cover; 6% in sand clay road; 6% in corn stalks, heavy cover; 2% in grass and pea vine stubble, light cover; 2% bare.			:14	4.40	.58	:45	.465	.074
			:17	3.20	.74	:49	.470	.106
			:21	1.80	.86	1:01	.320	.185
			:24	.80	.90	:06	.270	.209
			:26	5.10	1.07	:16	.186	.247
			:29	4.20	1.27	:25	.152	.273
			:34	1.32	1.38	:50	.0946	.324
			:43	.67	1.48	2:10	.0593	.350
			:48	.24	1.50	:35	.0371	.370
			:55	0	1.50	3:03	.0250	.384
			1:04	.20	1.53	4:15	.0087	.405
			:12	.08	1.54	5:40	.0015	.412
			:18	.60	1.60	8:45	.0001	.414
			:20	0	1.60			
						Total rainfall at each station for above period		
			Raingage No.		Total			
			R-5		1.58			
			R-6		1.61			
Event of March 21, 1942								
2-23-42	0.28	0	3-21-42	Raingages	R-5, R-6 ^{1/}	3-21-45		
2-24	.44	.010	12:02p	0	0	12:16p	0	0
3-2	1.75	.176	:15	.09	.02	:38	.0018	T
3-5	.53	0	:17	.60	.04	:41	.0064	T
3-8	.95	.069	:25	.82	.15	:46	.0142	.001
3-13	.34	0	:32	.26	.18	:48	.0267	.002
3-17	.30	0	:36	.45	.21	:53	.144	.009
3-20	.74	.010	:40	.90	.27	1:03	.272	.044
3-21	.11	.002	:47	2.83	.60	:08	.338	.069
						:11	.346	.086
			:55	1.28	.77	:21	.282	.139
						:28	.222	.168
			1:01	.80	.85	2:08	.0795	.269
			:04	1.40	.92	3:08	.0190	.318
			:09	2.76	1.15	:23	.0124	.322

Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.
1/ Rainfall computed by Thiessen Polygon method for raingages R-5 and R-6.

Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.
^{1/} Rainfall computed by Thiessen Polygon method for raingages R-5 and R-6.

Americus, Georgia			Watershed W-IV			(9.4)		Area - 59.2	
Antecedent conditions			RainFall			Runoff			
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)	
Watershed Conditions: 84% in oats, close stand, approx. 8" high; 6% in sand clay road; 10% in grass and idle weeds.			:12	.40	1.22	:43	.0087	.325	
			:20	.08	1.23	4:33	.0043	.331	
			:30	.24	1.27	7:13	.0016	.339	
			:34	.15	1.28	8:43	.0003	.340	
			:40	.30	1.31				
			2:00	.12	1.35				
			3:24	.01	1.36				
			Total rainfall at each station for above period						
			Raingage No.		Total				
			R-5	1.30					
R-6	1.38								
Event of August 19, 1942									
7-23-42	0.28	0	8-19-42	Raingages	R-5, R-6 ^{1/}	8-19-42			
7-24	.29	0	4:05p	0	0	4:15p	0	0	
7-25	.34	0	:12	1.80	.21	:35	.0001	T	
8-3	.21	0	:15	.40	.23	:38	.0004	T	
8-4	.55	0	:32	0	.23	:40	.0010	T	
8-5	.13	0	:35	1.20	.39	:41	.0009	T	
8-7	.03	0	:40	3.60	.69	:45	.0023	T	
8-8	.32	0	:45	4.08	1.03	:47	.0023	T	
8-9	.65	.001	:50	.96	1.11	:50	.0045	T	
8-11	.19	0	:56	.80	1.19	:55	.0079	.001	
8-12	.96	.077	5:00	.15	1.20	:56	.0136	.001	
8-16	.07	0	:50	.01	1.21	:57	.0217	.001	
8-17	.46	.088	7:25	.02	1.24	5:00	.0442	.003	
8-18	.17	0	9:00	.01	1.26	:05	.0830	.008	
8-19	.02	0				:15	.148	.027	
Watershed Conditions: 84% in oats, in the dough stage; 6% in peanuts, good stand; 6% in sand clay road; 4% in idle weeds and grass.						:20	.168	.040	
						:22	.165	.046	
						6:00	.0712	.121	
						:35	.0249	.149	
						:50	.0190	.154	
						7:05	.0124	.158	
						:55	.0043	.165	
						8:35	.0015	.167	
						9:25	.0003	.168	
			Total Rainfall at each station for above period						
Raingage No.		Total							
R-5	1.51								
R-6	1.18								

Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.
1/ Rainfall computed by Thiessen Ploygon method for raingages R-5 and R-6.

Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.

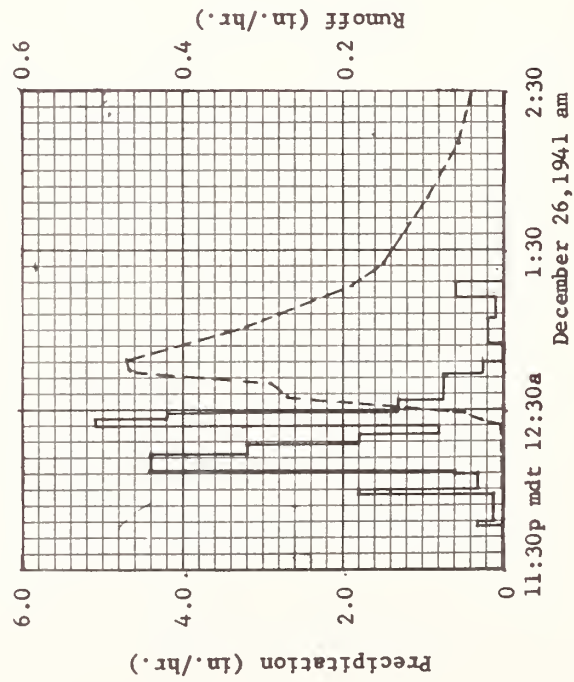
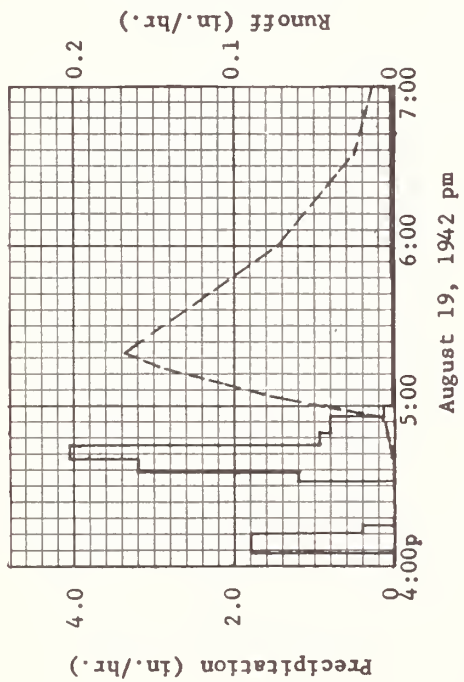
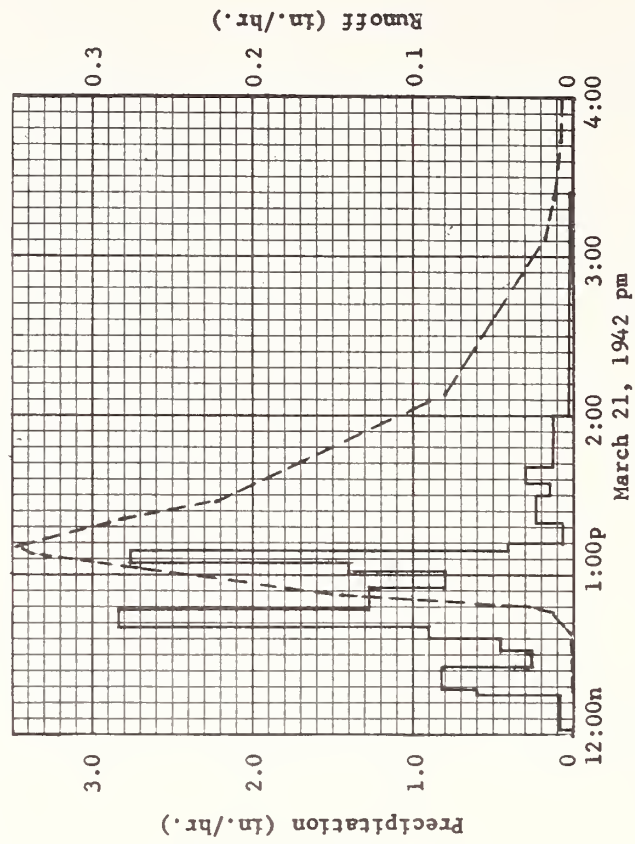
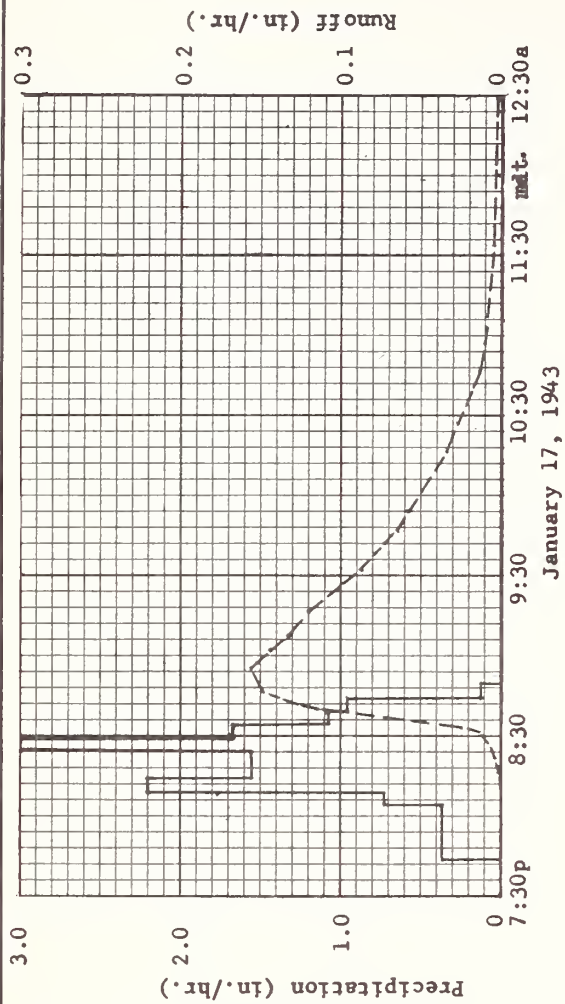
^{1/} Rainfall computed by Thiessen Ploygon method for rainggages R-5 and R-6.

Americus, Georgia			Watershed W-IV			(9.4)	Area - 59.2 acres	
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of January 17, 1943								
12-22-42	0.54	0	1-17-43	Raingages R-5, R-6 ^{1/}		1-17-43		
12-26	.10	0	7:44p	0	0	8:11p	0	0
12-27	.13	0				:16	.0010	T
12-28	1.30	.042	8:04	.36	.12	:22	.0018	T
12-29	.43	0	:09	.72	.18	:26	.0045	T
						:28	.0093	.001
1-7-43	1.25	.017	:14	2.40	.38	:31	.0126	.001
1-8	.30	.026	:24	1.56	.64	:33	.0237	.002
1-13	.09	0	:29	3.00	.89	:40	.115	.010
1-16	.45	.004	:34	1.68	1.03	:42	.128	.014
1-17	.19	0	:39	1.08	1.12	:47	.149	.025
						:55	.155	.046
			:44	.96	1.18	:57	.151	.051
			:49	.12	1.19	9:02	.144	.063
Watershed Conditions: 84% in oat stubble with good growth Bermuda grass, lespedeza and weeds; 6% in sand clay road; 2% in Kudzu and weeds (waterway); 8% idle weeds and grass.						:07	.131	.074
						:17	.120	.095
						:32	.0870	.121
						:42	.0734	.135
						:47	.0650	.140
						:57	.0576	.151
						10:17	.0339	.166
						:27	.0279	.171
						:47	.0131	.178
						:57	.0105	.180
			11:34	.0054	.185			
			12:57	.0016	.190			
			1:27	.0010	.190			
			3:57	0	.191			
Total rainfall at each station for above period								
Raingage No.				Total				
R-5				0.99				
R-6				1.26				

Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.
1/ Rainfall computed by Thiessen Polygon method for raingages R-5 and R-6.

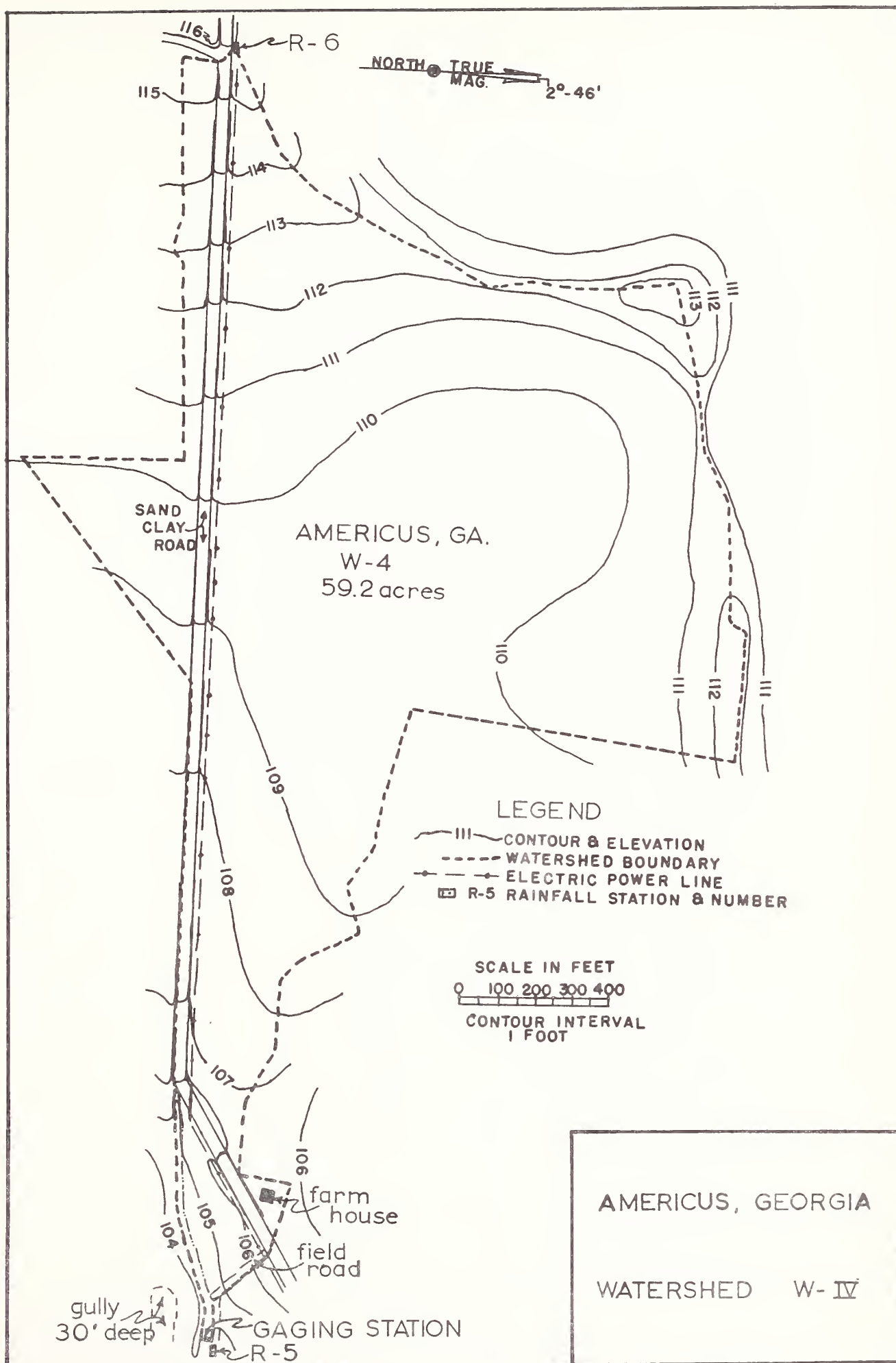
Notes: To convert runoff in in/hr to cfs, multiply by 59.7015.

^{1/} Rainfall computed by Thiessen Polygon method for raingages R-5 and R-6.



Americus, Georgia

Watershed W-IV



High Point, North Carolina West Fork of Deep River Watershed (11.1) Area - 20,544 acres								
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of July 23, 1938								
6-23-38	0	0.0139	7-23-38	Raingage 45, 31, 48 ^{1/}		7-22-38		
6-24	0	.0127	1:00a	0	0	12:00m	0.0014	0
6-25	2.10	.0880	2:00	.02	.02	7-23-38		
6-26	0	.1552	3:00	.01	.03	8:00a	.0014	.0116
6-27	1.05	.0208	4:00	.05	.08	9:00	.0024	.0135
6-28	0	.1680	5:00	.02	.10	11:00	.0060	.0220
6-29, 30 ^{2/}	0	.0452	6:00	.02	.12	2:30p	.0075	.0456
7-1	0	.0151	7:00	.35	.47	3:00	.0075	.0494
7-2	.09	.0112	10:00	.01	.49	4:00	.0135	.0599
7-3	1.92	.4958				6:00	.0502	.1236
7-4	0	.1518	2:00p	0	.51	8:00	.0666	.2404
7-5	0	.0301	4:00	.01	.53	:30	.0685	.2742
7-6, 8	0	.0498	5:00	.36	.89	9:00	.0676	.3082
7-9	.37	.0162	6:00	.18	1.07	10:00	.0601	.3721
7-10	0	.0255	7:00	.11	1.18	12:00m	.0427	.4749
7-11, 13	0	.0349	8:00	.01	1.19	7-24		
7-14	.50	.0127	10:00	0	1.20	12:30a	.0386	.4953
7-15	.10	.0151	12:00m	0	1.20	1:50	.0268	.5389
7-16, 17	0	.0199	7-24-38			3:45	.0145	.5784
7-18	.64	.0487	1:00a	.01	1.21	11:00	.0048	.6484
7-19	.68	.0475	2:00	.02	1.23	2:15p	.0029	.6610
7-20	.30	.0985	3:00	.04	1.27	6:00	.0026	.6714
7-21	.46	.0463	4:00	.02	1.29			
7-22	.13	.0533	5:00	.03	1.32			
			6:00	.02	1.34			
Watershed Conditions: Cropland - 36%; idle land - 9%; pasture - 8%; woodland - 46%; farmyards and urban areas - 1%. (Note - information taken from 1935 survey as reported in USDA-SCS-TP-48.)			7:00	0	1.34			
			Total rainfall at each station for above period					
			Raingage No.		Total			
			45		1.35			
			31		1.31			
			48		1.36			
Event of December 26, 1938								
11-26-38	0	0.0290	12-26-38	Raingage 45, 31, 48 ^{1/}		12-25-38		
11-27	0	.0220	8:00a	0	0	12:00m	0.0007	0
11-28, 12-3 ^{2/}	0	.0927	9:00	.02	.02	12-26-38		
12-4	.19	.0139	10:00	.06	.08	12:45p	.0007	.0092
12-5	.94	.1309	11:00	.07	.15	3:00	.0012	.0113
12-6	0	.1286	12:00n	.06	.21	4:00	.0053	.0145
12-7, 8	0	.0672	1:00p	.05	.26	5:00	.0096	.0220
12-9	.40	.0487	2:00	.07	.33	6:50	.0164	.0459
12-10	0	.0417	3:00	.20	.53	8:00	.0241	.0696
12-11, 22	0	.2154	4:00	.11	.64	9:00	.0270	.0952
12-23	.15	.0139	5:00	.18	.82	10:00	.0290	.1232
12-24	.21	.0266	6:00	.26	1.08	11:20	.0305	.1628
12-25	0	.0185	7:00	.08	1.16	12:00m	.0299	.1830
			8:00	.03	1.19	12-27-38		
			9:00	.01	1.20	1:00a	.0275	.2117
Notes: To convert runoff in in/hr to cfs multiply by 20,716.8013. Data as reported in USDA-SCS-TP-48, March 1942.								
^{1/} Rainfall computed by Thiessen Poleygon method for gages 45, 31, 48.								
^{2/} Inclusive Dates								

High Point, North Carolina West Fork of Deep River Watershed (11.1) Area - 20,544 acres

Antecedent conditions			Rainfall			Runoff					
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)			
Watershed Conditions: Cropland - 36%; idle land - 9%; pasture 8%; woodland - 46%; farmyards and urban areas - 1%. (Note - information taken from 1935 survey as reported in USDA-SCS-TP-48.)			10:00	0	1.20	2:00	.0236	.2372			
						3:00	.0183	.2582			
						4:00	.0147	.2748			
						5:00	.0128	.2885			
						7:00	.0111	.3124			
						8:00	.0106	.3232			
						9:00	.0092	.3331			
						12:00n	.0063	.3563			
						3:00p	.0054	.3739			
						6:00	.0042	.3884			
						12:00m	.0029	.4098			
						12-28-38			8:00a	.0020	.4293
									12:00n	.0017	.4367
									12:00m	.0014	.4555
						Total rainfall at each station for above period					
						Raingage No.		Total			
						45		1.19			
						31		1.19			
						48		1.22			
			Event of February 26, 1939								
1-26-39	0	0.0028	2-25-39	Raingages	45,31,48 ^{1/}	2-24-39					
1-27,28 ^{2/}	0	.0044	7:00p	0	0	12:00m	0.0011	0			
1-29	.08	.0022	8:00	.01	.01	2-25					
1-30	.60	.0204	9:00	0	.01	11:00p	.0011	.0250			
1-31	0	.0052	10:00	.04	.05	12:00m	.0014	.0262			
2-1,2	0	.0061	11:00	.14	.19	2-26					
2-3	.70	.0139	12:00m	.19	.38	1:00a	.0024	.0282			
2-4	0	.0098	2-26			2:00	.0121	.0354			
2-5	0	.0044	1:00a	.24	.62	3:00	.0275	.0552			
2-6	.45	.0078	2:00	.29	.91	6:00	.0463	.1660			
2-7	0	.0100	3:00	.25	1.16	:30	.0479	.1895			
2-8	0	.0044	4:00	.09	1.25	8:00	.0443	.2587			
2-9	1.29	.0323	5:00	.08	1.33	9:15	.0376	.3099			
2-10	.07	.0373	6:00	.02	1.35	11:10	.0294	.3742			
2-11	.10	.0102	7:00	0	1.35	1:00p	.0241	.4234			
2-12,13	0	.0100	8:00	.01	1.36	4:00	.0188	.4878			
2-14	.29	.0067	9:00	.03	1.39	6:00	.0145	.5212			
2-15	.88	.0331	10:00	.01	1.40	7:00	.0130	.5349			
2-16	0	.0169	11:00	0	1.40	9:00	.0094	.5573			
2-17,20	0	.0176				11:00	.0072	.5739			
2-21	.21	.0034				12:00m	.0068	.5809			
2-22	0	.0037				2-27					
2-23,24	0	.0052				2:30a	.0058	.5966			
						5:00	.0048	.6099			
						12:00n	.0036	.6395			
						12:00m	.0026	.6768			

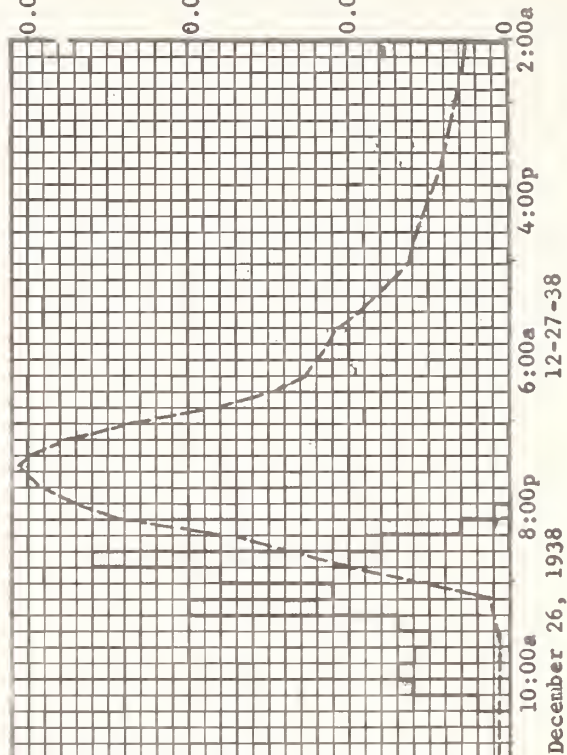
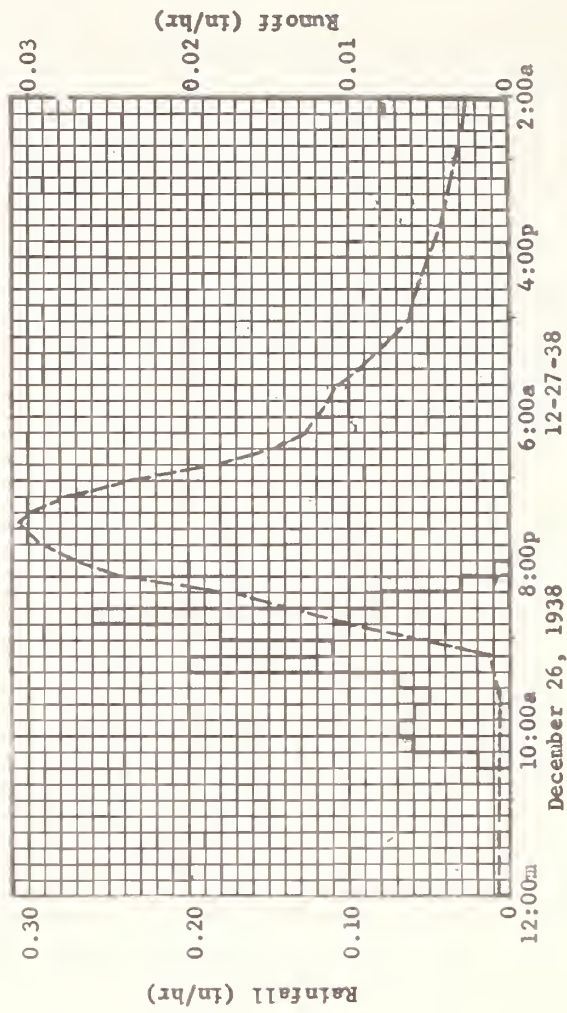
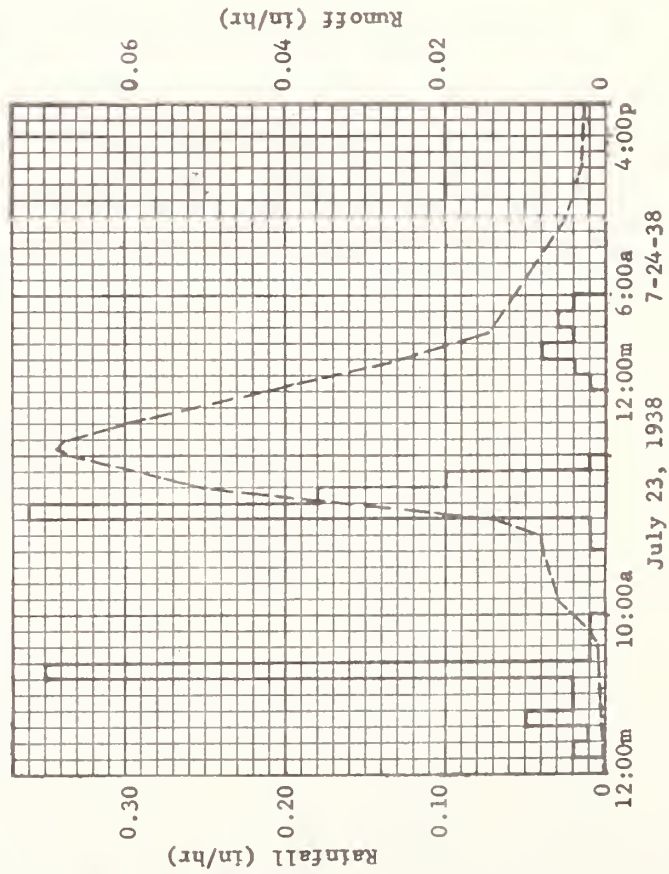
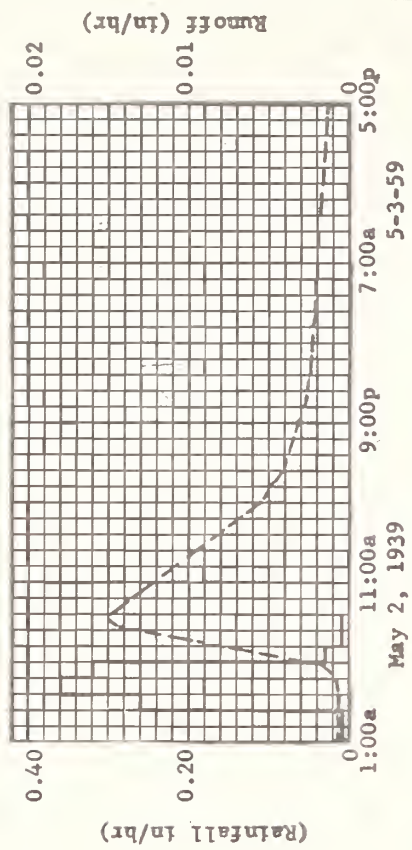
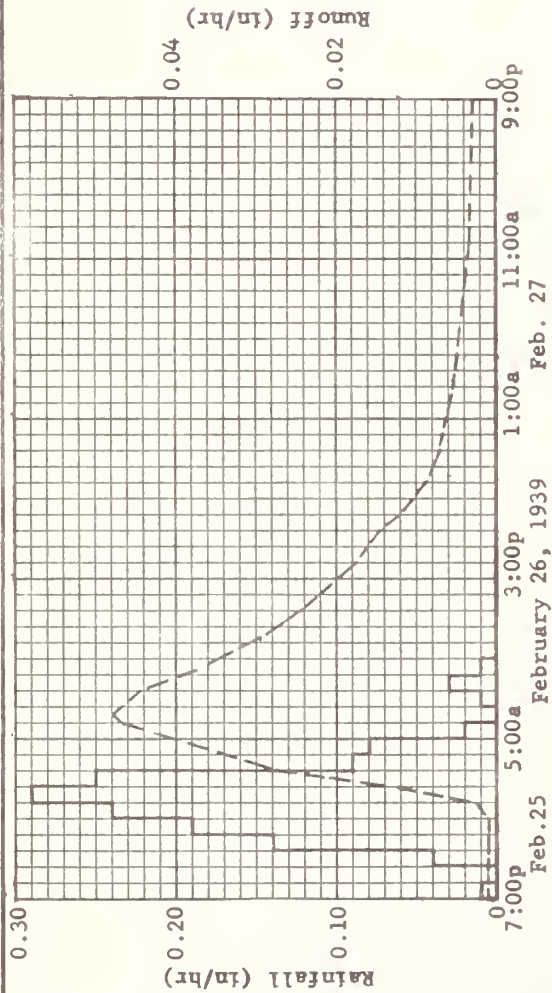
Notes: To convert runoff in in/hr to cfs multiply by 20,716.8013. Data as reported in USDA-SCS-TP-48, March 1942.

1/ Rainfall computed by Thiessen Pologon method for gages 45, 31, 48.

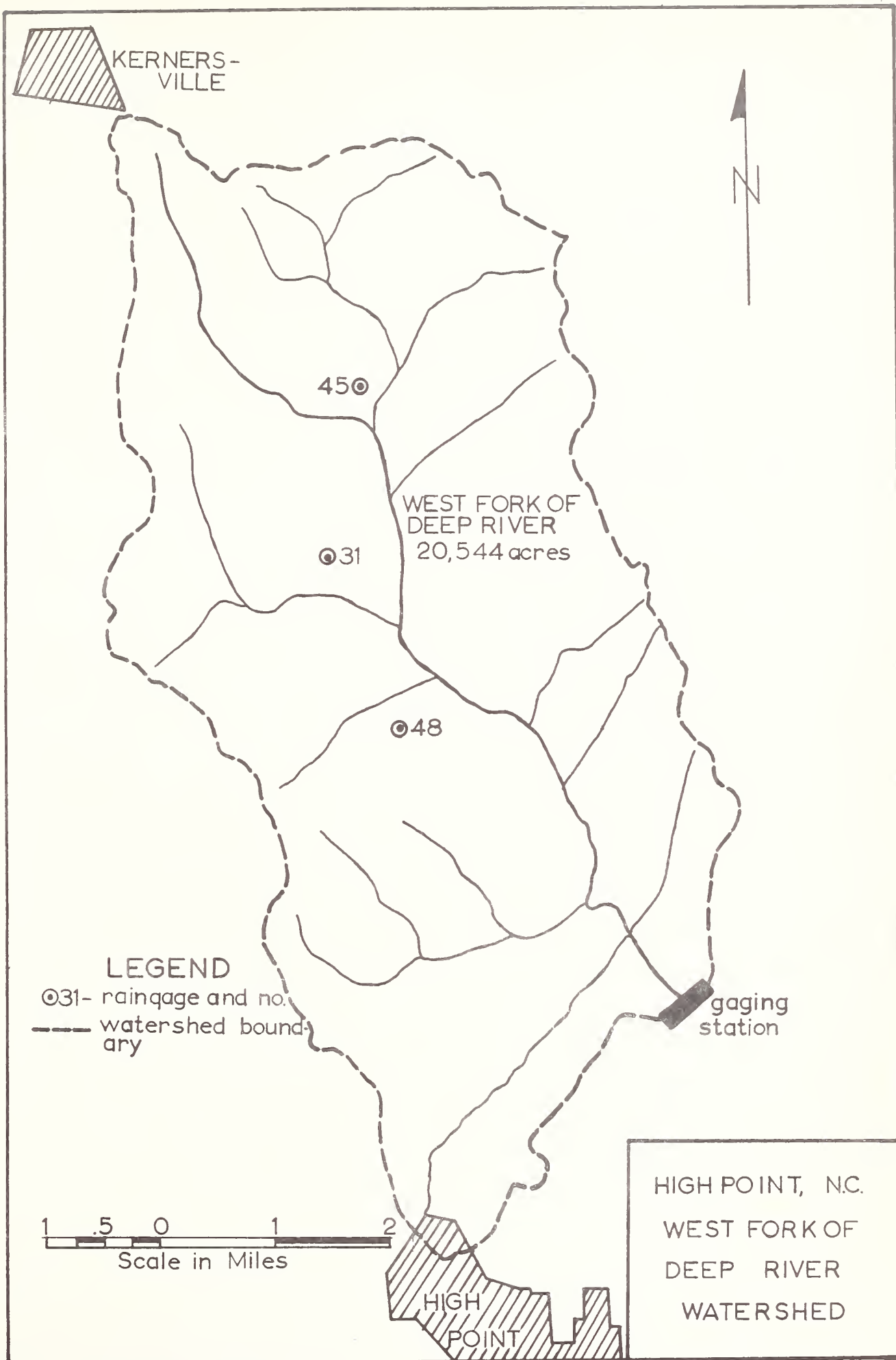
2/ Inclusive Dates

High Point, North Carolina West Fork of Deep River Watershed (11.1) Area - 20,544 acres								
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall ^{1/} (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Watershed Conditions: Cropland - 36%; idle land - 9%; pasture - 8%; woodland - 46%; farmyards and urban areas - 1%. (Note - information taken from 1935 survey as reported in USDA-SCS-TP-48.)			Total rainfall at each station for above period					
			Raingage No.		Total			
			45		1.45			
			31		1.45			
			48		1.41			
Event of May 2, 1939								
4-2-39	0	0.0487	5-2-39	Raingage 45, 31 ^{1/}		5-1-39		
4-3, 5 ^{2/}	0	.0788	1:00a	0	0	12:00m	0.0007	0
4-6	.42	.0371	2:00	.01	.01	5-2		
4-7	0	.0417	3:00	.01	.02	4:00a	.0007	.0029
4-8, 16	0	.1877	4:00	.26	.28	5:00	.0009	.0037
4-17	.74	.0487	5:00	.36	.64	:50	.0017	.0048
4-18	0	.0463	6:00	.32	.96	8:10	.0142	.0233
4-19, 20	0	.0475	7:00	.03	.99	:45	.0151	.0319
4-21	.14	.0197	8:00	.01	1.00	4:00p	.0056	.1068
4-22	0	.0208	9:00	.01	1.01	5:10	.0048	.1129
4-23, 24	0	.0359	10:00	0	1.01	6:00	.0041	.1166
4-25	.11	.0185				10:00	.0029	.1306
4-26	.14	.0243				12:00m	.0026	.1360
4-27	.17	.0197				5-3		
4-28	.24	.0406				1:30a	.0024	.1398
4-29, 30	0	.0440				12:00n	.0017	.1613
5-1	0	.0174				9:00p	.0012	.1744
						12:00m	.0013	.1781
Watershed Conditions: Cropland - 36%; idle land - 9%; pasture 8%; woodland - 46%; farmyards and urban areas - 1%. (Note - information taken from 1935 survey as reported in USDA-SCS-TP-48.)			Total rainfall at each station for above period					
			Raingage No.		Total			
			45		1.05			
			31		.98			

Notes: To convert runoff in in/hr to cfs multiply by 20,716.8013. Data as reported in USDA-SCS-TP-48, March 1942.
1/ Rainfall computed by Thiessen Poloygon method for gages 45, 31,
2/ Inclusive Dates



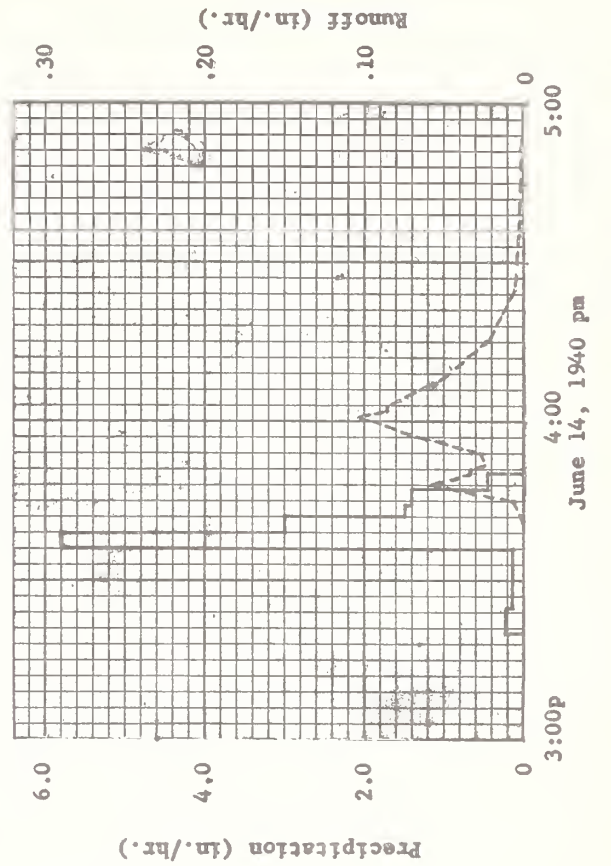
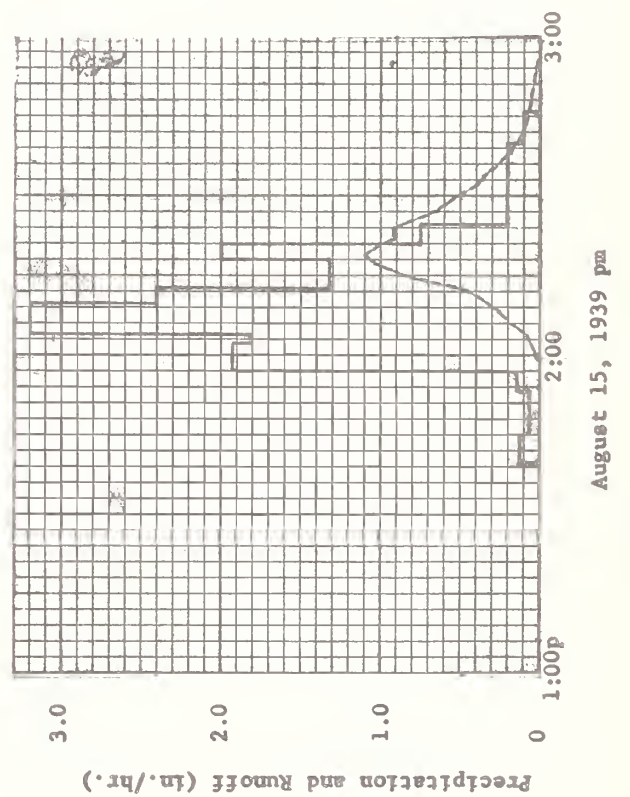
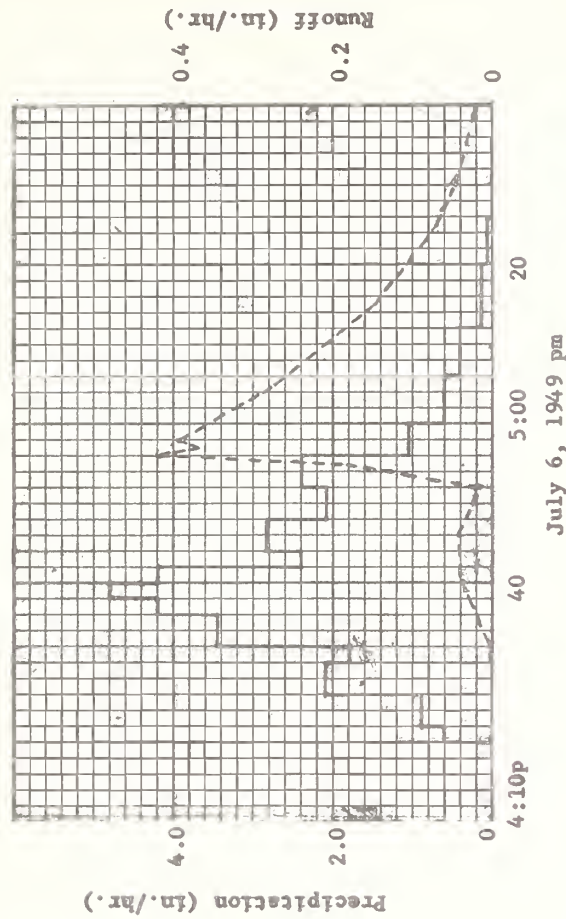
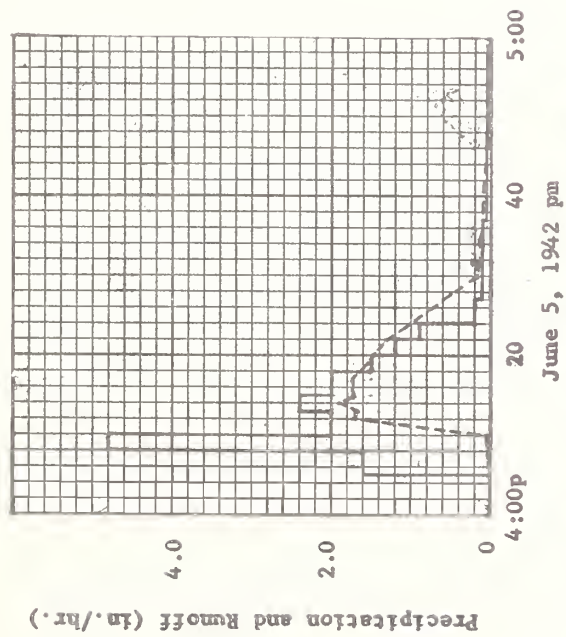
High Point, North Carolina West Fork Deep River Watershed



Blacksburg, Virginia			Watershed W-III			(13.2)	Area - 19.3 acres	
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
Event of August 15, 1939								
7-14-39	0.52	0.049	8-15-39	Raingage	R-3	8-15-39		
7-18	.35	.018	1:40p	0	0	1:59p	0	0
7-19	.53	.030	:45	.12	.01	2:00	.0006	T
7-20	.40	.002	:53	.08	.02	:04	.0867	.003
7-21	.23	.001	:57	.15	.03	:06	.190	.008
7-29	.38	.001	2:02	1.92	.19	:08	.264	.015
8-2	.64	.072	:04	1.80	.25	:12	.437	.039
8-4	.02	0	:10	3.20	.57	:15	.843	.071
8-6	.11	0	:13	2.40	.69	:17	1.02	.102
8-7	.62	.057	:18	1.32	.80	:19	1.10	.137
8-13	.12	0	:21	2.00	.90	:21	1.00	.172
8-14	.48	.012	:25	0.75	.95	:22	.913	.188
			:40	0.20	1.00	:24	.913	.218
			:46	0.10	1.01	:27	.668	.258
Watershed Conditions: 89% of area was in corn, with straight row cultivation and with rows running about NE to SW, parallel to south fence. The corn was 8 to 12 feet high with sparse weeds; last tillage operation was May 31. 9% of the area was in pasture and 2% in woods.						:32	.394	.302
						:34	.367	.315
						:38	.186	.333
						:40	.153	.339
						:42	.100	.343
						:55	.0214	.356
						4:00	0	.368
Event of June 14, 1940								
5-15-40	0.11	0	6-14-40	Raingage	R-4	6-14-40		
5-20	.16	0	3:20p	0	0	3:41p	0	0
5-22	.49	R ¹ /	:25	.24	.02	:45	.0065	T
5-23	.15	0	:36	.17	.05	:48	.0599	.002
5-24	2.44	R ¹ /	:39	5.80	.34			
5-25	.04	0	:42	3.00	.49	:50	.0321	.003
5-26	.23	0	:44	1.50	.54	:51	.0321	.004
5-29	.19	0	:47	1.40	.61	:52	.0243	.004
5-30	1.63	R ¹ /	:50	.45	.64	:54	.0268	.005
5-31	.36	R ¹ /				:57	.0676	.008
6-4	.54	0				:59	.0869	.010
6-10	.70	0				4:01	.103	.014
Watershed Conditions: The cultivated portion, 89% of the watershed was in the wheat phase of a corn, wheat, clover rotation; wheat was 3 feet high in the full dough stage. 9% of the area was in pasture and 2% in woods.						:02	.0847	.015
						:03	.0847	.016
						:07	.0555	.021
						:15	.0212	.026
						:25	.0068	.029
						:35	.0026	.029
						5:00	0	.030
Notes: To convert runoff in in/hr to cfs, multiply by 19.4544. 1/ Runoff not measured; "R" indicates days on which runoff occurred.								

Blacksburg, Virginia			Watershed W-III			(13.2) Area - 19.3 acres		
Antecedent conditions			Rainfall			Runoff		
Date	Rainfall (inches)	Runoff (inches)	Date and time	Intensity (in/hr)	Acc. (inches)	Date and time	Rate (in/hr)	Acc. (inches)
<u>Event of June 5, 1942</u>								
4-9-42	0.52	0	6-5-42	Raingage	R-3	6-5-42		
5-7	.61	0	4:05p	0	0	4:06p	0	0
5-14	.05	0	:08	1.60	.08	:10	.0586	.002
5-15	1.64	0	:10	4.80	.24	:12	1.70	.031
5-16	1.25	.218	:13	2.00	.34	:13	1.69	.060
5-19	1.48	.297	:15	2.40	.42	:14	1.90	.089
5-20	.42	.002	:18	2.00	.52	:15	1.73	.120
5-21	1.04	.259	:20	1.50	.57	:17	1.78	.178
5-22	.19	.022	:22	1.20	.61	:19	1.48	.232
6-1	.71	.116	:24	.90	.64	:22	1.31	.302
6-2	.70	.272	:27	.20	.65	:24	1.01	.341
<u>Watershed Conditions:</u> The cultivated portion, 89% of the watershed, was in the corn phase of a corn, wheat, clover rotation. The area was cultivated 11 to 17 days prior to this storm. The corn was about one foot high in rows running about NE to SW parallel to the south fence. 9% of the area was in pasture and 2% in woods.			:37	.12	.67	:30	.0946	.396
			5:00	.05	.69	:50	.0185	.415
						5:04	0	.417
<u>Event of July 6, 1949</u>								
6-13-49	0.04	0	7-6-49	Raingage	R-3	7-6-49		
6-14	.53	T	4:20p	0	0	4:28p	0	0
6-15	.30	T	:22	.60	.02	:32	.0011	T
6-16	.68	.003	:26	.90	.08	:39	.0374	.002
6-17	.26	.001	:30	2.10	.22	:41	.0414	.004
6-25	.06	0	:32	1.80	.28	:46	.0409	.007
6-28	2.40	.037	:36	3.45	.56	:52	.0190	.010
6-29	.53	.001	:38	4.20	.70	:55	.186	.015
6-30	.63	.004	:40	4.80	.86	:56	.420	.020
			:42	4.20	1.00	:57	.369	.027
<u>Watershed Conditions:</u> The cultivated portion was in contour strips with a rotation of corn, small grain, and clover. 37% of area was in small grain, harvested July 1; 29% of area was in corn, 21 in. high, cultivated June 10; 23% of area was in clover, second growth, 4 in. high. 9% of area was in pasture and 2% in woods.			:44	2.40	1.08	:58	.398	.033
			:48	2.85	1.27	5:05	.274	.072
			:52	2.10	1.41	:15	.144	.107
			:56	2.40	1.57	:25	.0686	.125
			5:00	1.05	1.64	:30	.0439	.129
			:06	.60	1.70	:45	.0111	.136
			:12	.40	1.74	6:25	0	.140
			:20	.15	1.76			
			:26	.10	1.77			
Notes: To convert runoff in in/hr to cfs, multiply by 19.4544								

BLACKSBURG, VIRGINIA WATERSHED W-III



RAINGAGE R-4 IS 37° N.E. AND 960'
FROM RAINGAGE R-3

RAINFALL MEASURING
STATION
R-3

TRUE
MAG. NORTH

PASTURE

W-III
19.3 ACRES

PASTURE

WOODED
AREA

GAGING
STATION
W-III

50 0 50 100 150 200
SCALE IN FEET
CONTOUR INTERVAL- 10 FEET

LEGEND
 - - - - - WATERWAY
 - - - - - WATERSHED BOUNDARY
 o o o o o WOODED AREA
 x x x x x FENCE
 ~~~~~ 2070 ~~~~~ CONTOURS

BLACKSBURG, VIRGINIA  
WATERSHED W-III

SHEET 4 OF 4



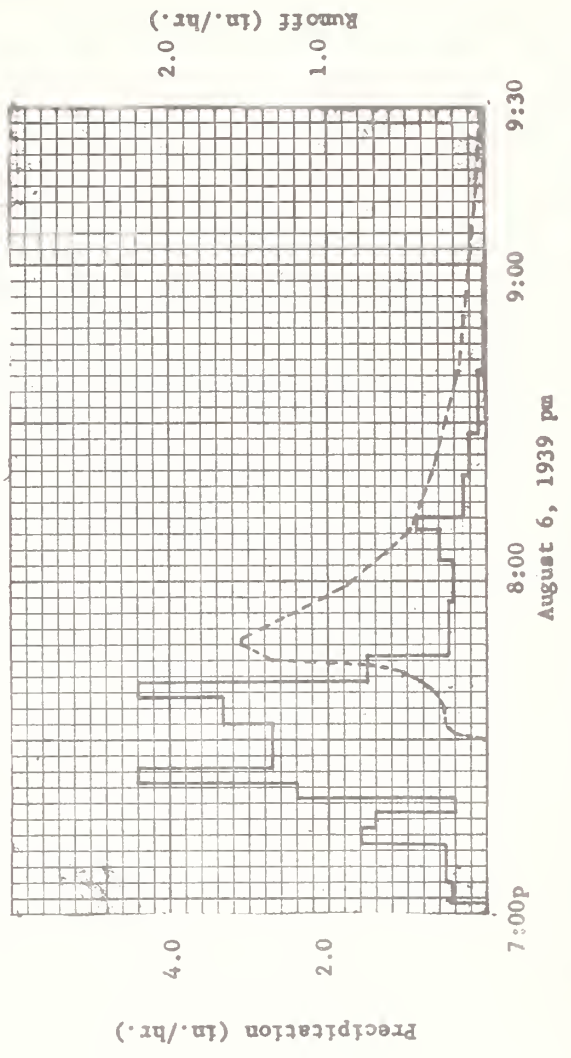
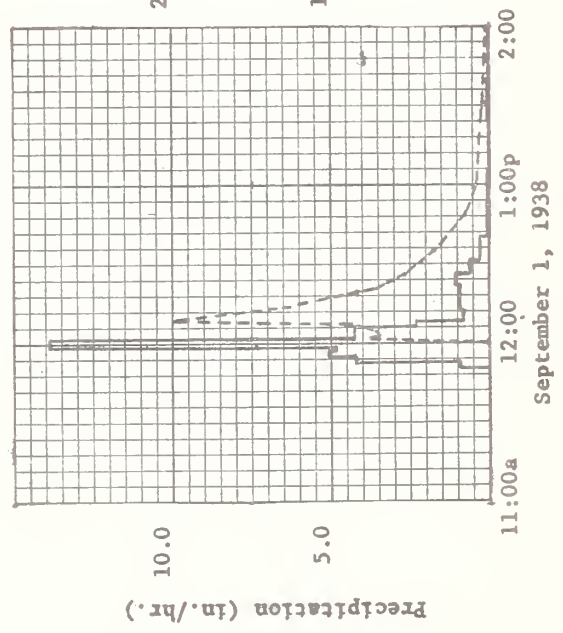
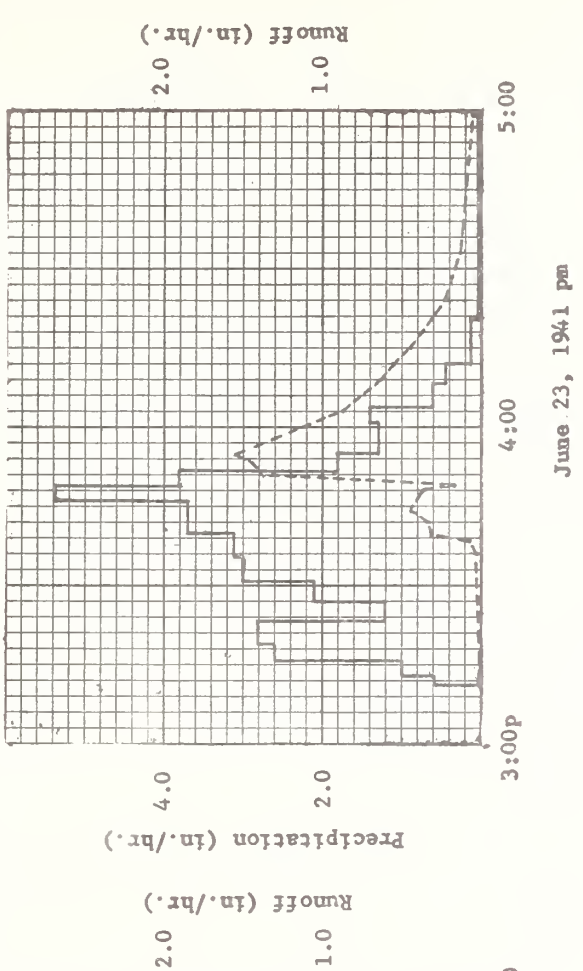
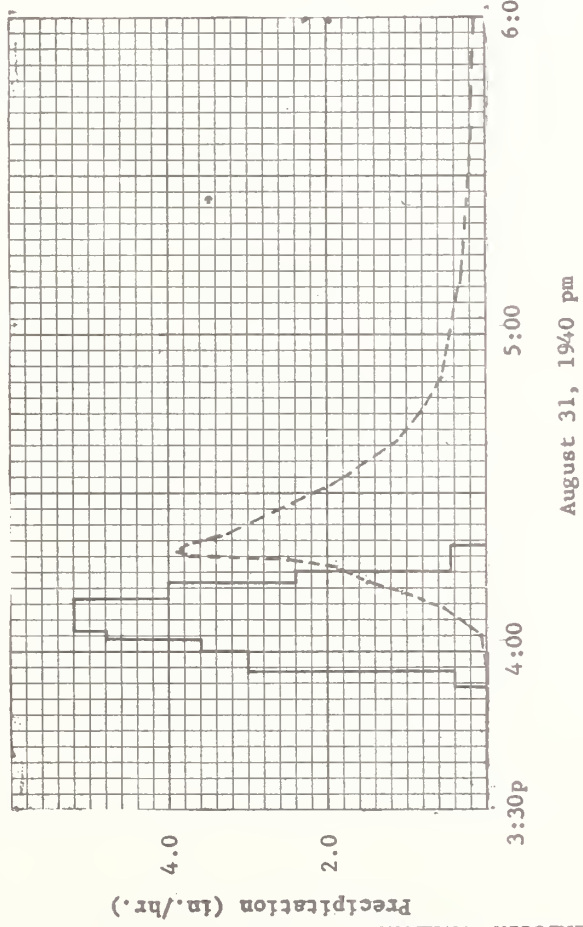
| Chatham, Virginia      Watershed W-III      (14.3)      Area - 17.1 acres                                                                                                                               |                      |                    |                  |                      |                  |                  |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of September 1, 1938</b>                                                                                                                                                                       |                      |                    |                  |                      |                  |                  |                 |                  |
| 8-2-38                                                                                                                                                                                                  | 0.10                 | 0                  | 9-1-38           | Raingage             | R-3              | 9-1-38           |                 |                  |
| 8-3                                                                                                                                                                                                     | .64                  | 0.152              | 11:51a           | 0                    | 0                | 12:00n           | 0               | 0                |
| 8-11                                                                                                                                                                                                    | .08                  | 0                  | :53              | .90                  | .03              | :02p             | .746            | .012             |
| 8-17                                                                                                                                                                                                    | .08                  | 0                  | :55              | 4.20                 | .17              | :03              | .693            | .024             |
| 8-18                                                                                                                                                                                                    | .02                  | 0                  | :57              | 5.10                 | .34              | :04              | .708            | .036             |
|                                                                                                                                                                                                         |                      |                    | :59              | 4.80                 | .50              | :07              | .884            | .076             |
|                                                                                                                                                                                                         |                      |                    | 12:01p           | 13.80                | .96              | :09              | 1.98            | .124             |
|                                                                                                                                                                                                         |                      |                    | :06              | 4.32                 | 1.32             | :14              | 1.27            | .259             |
|                                                                                                                                                                                                         |                      |                    | :08              | 2.70                 | 1.41             | :19              | .836            | .347             |
|                                                                                                                                                                                                         |                      |                    | :12              | .75                  | 1.46             | :21              | .729            | .373             |
|                                                                                                                                                                                                         |                      |                    | :22              | .78                  | 1.59             | :26              | .539            | .426             |
|                                                                                                                                                                                                         |                      |                    | :26              | 1.05                 | 1.66             | :35              | .354            | .493             |
|                                                                                                                                                                                                         |                      |                    | :31              | .60                  | 1.71             | :50              | .145            | .555             |
|                                                                                                                                                                                                         |                      |                    | :40              | .33                  | 1.76             | 1:00             | .0938           | .575             |
|                                                                                                                                                                                                         |                      |                    | 1:04             | .05                  | 1.79             | :30              | .0296           | .606             |
|                                                                                                                                                                                                         |                      |                    | :24              | .03                  | 1.80             | 2:00             | .0098           | .616             |
|                                                                                                                                                                                                         |                      |                    | :40              | .04                  | 1.81             | :30              | .0034           | .619             |
|                                                                                                                                                                                                         |                      |                    | 2:04             | .02                  | 1.82             | 3:15             | 0               | .620             |
|                                                                                                                                                                                                         |                      |                    | :14              | .12                  | 1.84             |                  |                 |                  |
| <b>Event of August 6, 1939</b>                                                                                                                                                                          |                      |                    |                  |                      |                  |                  |                 |                  |
| 7-8-39                                                                                                                                                                                                  | 1.33                 | 0.235              | 8-6-39           | Raingage             | R-3              | 8-6-39           |                 |                  |
| 7-9                                                                                                                                                                                                     | .52                  | .004               | 6:59p            | 0                    | 0                | 7:30p            | 0               | 0                |
| 7-10                                                                                                                                                                                                    | .25                  | .023               | 7:03             | .45                  | .03              | :32              | .204            | .003             |
| 7-18                                                                                                                                                                                                    | .50                  | .020               | :10              | .51                  | .09              | :33              | .242            | .007             |
| 7-19                                                                                                                                                                                                    | .06                  | 0                  | :13              | 1.60                 | .17              | :36              | .284            | .020             |
| 7-20                                                                                                                                                                                                    | .79                  | .061               | :16              | 1.40                 | .24              | :39              | .324            | .036             |
| 7-21                                                                                                                                                                                                    | .26                  | 0                  | :19              | .40                  | .26              | :40              | .368            | .041             |
| 7-23                                                                                                                                                                                                    | .09                  | 0                  | :22              | 2.20                 | .37              | :41              | .409            | .048             |
| 7-26                                                                                                                                                                                                    | .26                  | .008               | :25              | 4.40                 | .59              | :43              | .519            | .063             |
| 7-29                                                                                                                                                                                                    | .17                  | 0                  | :33              | 2.70                 | .95              | :44              | .746            | .074             |
| 8-3                                                                                                                                                                                                     | .60                  | .003               | :38              | 3.36                 | 1.23             | :45              | 1.35            | .091             |
| 8-4                                                                                                                                                                                                     | .08                  | 0                  | :41              | 4.40                 | 1.45             | :48              | 1.53            | .163             |
| 8-6                                                                                                                                                                                                     | .06                  | 0                  | :46              | 1.56                 | 1.58             | :49              | 1.53            | .189             |
|                                                                                                                                                                                                         |                      |                    | :56              | .48                  | 1.66             | :59              | .893            | .391             |
|                                                                                                                                                                                                         |                      |                    | 8:04             | .45                  | 1.72             | 8:05             | .622            | .467             |
|                                                                                                                                                                                                         |                      |                    | :10              | .60                  | 1.78             | :10              | .490            | .513             |
|                                                                                                                                                                                                         |                      |                    | :12              | .90                  | 1.81             | :15              | .404            | .550             |
|                                                                                                                                                                                                         |                      |                    | :20              | .30                  | 1.85             | :20              | .342            | .581             |
|                                                                                                                                                                                                         |                      |                    | :28              | .23                  | 1.88             | :40              | .177            | .668             |
|                                                                                                                                                                                                         |                      |                    | :40              | .10                  | 1.90             | :50              | .126            | .693             |
|                                                                                                                                                                                                         |                      |                    | 9:00             | .03                  | 1.91             | 9:15             | .0526           | .730             |
|                                                                                                                                                                                                         |                      |                    |                  |                      |                  | :30              | .0292           | .740             |
|                                                                                                                                                                                                         |                      |                    |                  |                      |                  | 10:30            | .0037           | .757             |
|                                                                                                                                                                                                         |                      |                    |                  |                      |                  | 11:00            | .0013           | .758             |
|                                                                                                                                                                                                         |                      |                    |                  |                      |                  | :30              | 0               | .758             |
| <b>Watershed Conditions: 60%<br/>idle weeds, 6 feet tall; 31%<br/>in tobacco, 2.5 to 3 feet tall;<br/>2% in grass, 1.25 feet tall;<br/>7% in woods. All cultivated<br/>area is completely terraced.</b> |                      |                    |                  |                      |                  |                  |                 |                  |
| <b>Watershed Conditions: 20%<br/>idle weeds, 10 inches tall;<br/>71% in tobacco, 36 inches tall,<br/>1/3 pulled; 2% in Grass, 4 inches<br/>tall; 7% in woods.</b>                                       |                      |                    |                  |                      |                  |                  |                 |                  |

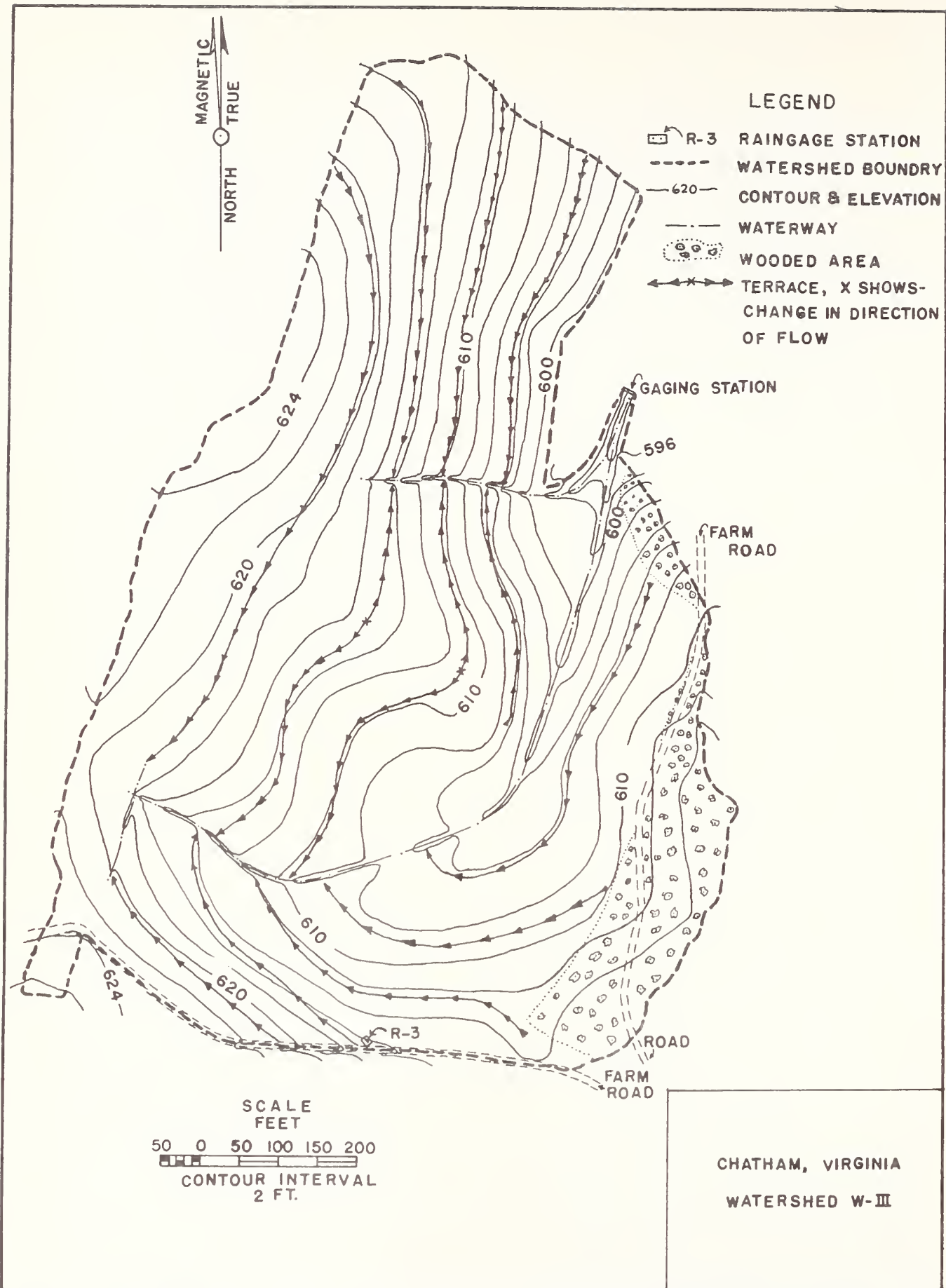
Notes: To convert runoff in in/hr to cfs, multiply by 17.241



| Antecedent conditions                                                                                                                                                                                                                        |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                         | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of August 31, 1940</b>                                                                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                 |                  |
| 8-5-40                                                                                                                                                                                                                                       | 0.12                 | 0                  | 8-31-40          | Raingage             | R-3              | 8-31-40          |                 |                  |
| 8-10                                                                                                                                                                                                                                         | .21                  | 0                  | 3:53p            | 0                    | 0                | 3:58p            | 0               | 0                |
| 8-11                                                                                                                                                                                                                                         | .42                  | .018               | :56              | .40                  | .02              | 4:03             | .0241           | .001             |
| 8-13                                                                                                                                                                                                                                         | .36                  | 0                  | 4:00             | 3.00                 | .22              | :08              | .274            | .013             |
| 8-14                                                                                                                                                                                                                                         | 6.86                 | 3.351              | :02              | 3.60                 | .34              | :11              | .519            | .033             |
| 8-15                                                                                                                                                                                                                                         | 1.84                 | 1.005              | :04              | 4.80                 | .50              | :13              | .763            | .055             |
| 8-16                                                                                                                                                                                                                                         | .21                  | .123               | :10              | 5.20                 | 1.02             | :16              | .944            | .097             |
| 8-17                                                                                                                                                                                                                                         | .54                  | .149               | :13              | 4.00                 | 1.22             | :17              | 1.23            | .115             |
| 8-18                                                                                                                                                                                                                                         | 0                    | .020               | :15              | 2.40                 | 1.30             | :18              | 1.86            | .141             |
| 8-19                                                                                                                                                                                                                                         | 0                    | .002               | :20              | .48                  | 1.34             | :19              | 1.93            | .173             |
| 8-24                                                                                                                                                                                                                                         | .49                  | .1128              |                  |                      |                  | :20              | 1.89            | .205             |
| 8-25                                                                                                                                                                                                                                         | .25                  | 0                  |                  |                      |                  | :22              | 1.69            | .264             |
| 8-28                                                                                                                                                                                                                                         | 1.69                 | .774               |                  |                      |                  | :31              | 1.06            | .470             |
| 8-29                                                                                                                                                                                                                                         | .03                  | .008               |                  |                      |                  | :34              | .846            | .518             |
| 8-30                                                                                                                                                                                                                                         | .34                  | .070               |                  |                      |                  | :40              | .585            | .590             |
| 8-31                                                                                                                                                                                                                                         | .08                  | .001               |                  |                      |                  | :46              | .404            | .639             |
| <b>Watershed Conditions:</b> 33%,<br>Grass and weeds in wheat<br>stubble, 10 inches tall; 3% in<br>grass outlet channel; 31% in<br>tobacco, 38 inches tall, 1/2<br>pulled, clean cultivated;<br>26% in peas, 16 inches tall,<br>thick stand, |                      |                    |                  |                      |                  | :52              | .293            | .674             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :58              | .226            | .700             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 5:10             | .157            | .738             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :30              | .103            | .781             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 6:30             | .0311           | .848             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 8:00             | .0094           | .879             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 9-2-40           |                 |                  |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 12:00m           | 0               | .898             |
| <b>Event of June 23, 1941</b>                                                                                                                                                                                                                |                      |                    |                  |                      |                  |                  |                 |                  |
| 5-30-41                                                                                                                                                                                                                                      | 0.34                 | 0                  | 6-23-41          | Raingage             | R-3              | 6-23-41          |                 |                  |
| 5-31                                                                                                                                                                                                                                         | .02                  | 0                  | 3:11p            | 0                    | 0                | 3:11p            | 0               | 0                |
| 6-1                                                                                                                                                                                                                                          | .11                  | 0                  | :13              | .60                  | .02              | :36              | .0027           | .001             |
| 6-2                                                                                                                                                                                                                                          | 2.56                 | .844               | :16              | 1.00                 | .07              | :38              | .0876           | .002             |
| 6-3                                                                                                                                                                                                                                          | .05                  | 0                  | :19              | 2.60                 | .20              | :40              | .315            | .009             |
| 6-4                                                                                                                                                                                                                                          | .23                  | 0                  | :23              | 2.70                 | .38              | :42              | .345            | .020             |
| 6-8                                                                                                                                                                                                                                          | .04                  | 0                  | :27              | 1.20                 | .46              | :44              | .439            | .033             |
| 6-9                                                                                                                                                                                                                                          | .34                  | .010               | :31              | 2.10                 | .60              | :45              | .436            | .040             |
| 6-12                                                                                                                                                                                                                                         | .35                  | 0                  | :35              | 3.00                 | .80              | :48              | .382            | .061             |
| 6-13                                                                                                                                                                                                                                         | .51                  | .033               | :40              | 3.12                 | 1.06             | :49              | .180            | .065             |
| 6-14                                                                                                                                                                                                                                         | .10                  | 0                  | :46              | 3.70                 | 1.43             | :51              | 1.39            | .092             |
| 6-15                                                                                                                                                                                                                                         | .29                  | .005               | :49              | 5.40                 | 1.70             | :53              | 1.43            | .139             |
| <b>Watershed Conditions:</b> 3% in<br>idle weeds; 62% in tobacco, 12<br>inches tall, row beds 5 inches<br>tall; 28% in Red top and<br>Lespedeza hay, 12 inches tall;<br>7% in woods.                                                         |                      |                    |                  |                      |                  | :55              | 1.55            | .188             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :55              | 1.80            | 1.98             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 4:03             | .884            | .350             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :09              | .628            | .426             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :04              | 1.40            | 2.18             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :08              | .60             | 2.22             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :12              | .45             | 2.25             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | :20              | .15             | 2.27             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 5:00             | .06             | 2.31             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 7:00             | .02             | 2.35             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 5:45             | .0105           | .612             |
|                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  | 8:15             | 0               | .626             |

Notes: To convert runoff in in/hr to cfs, multiply by 17.241







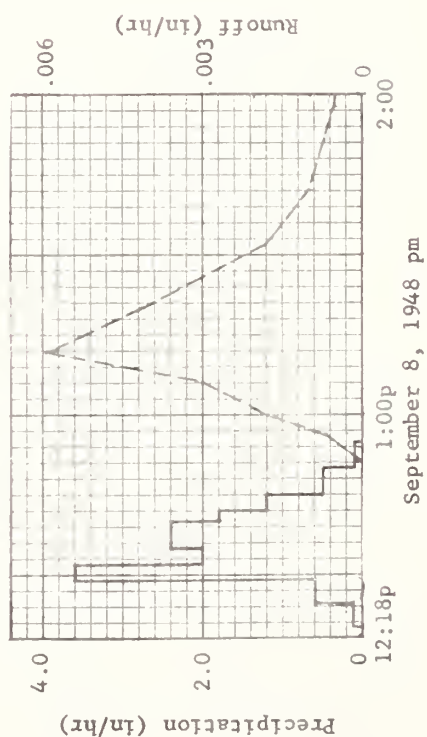
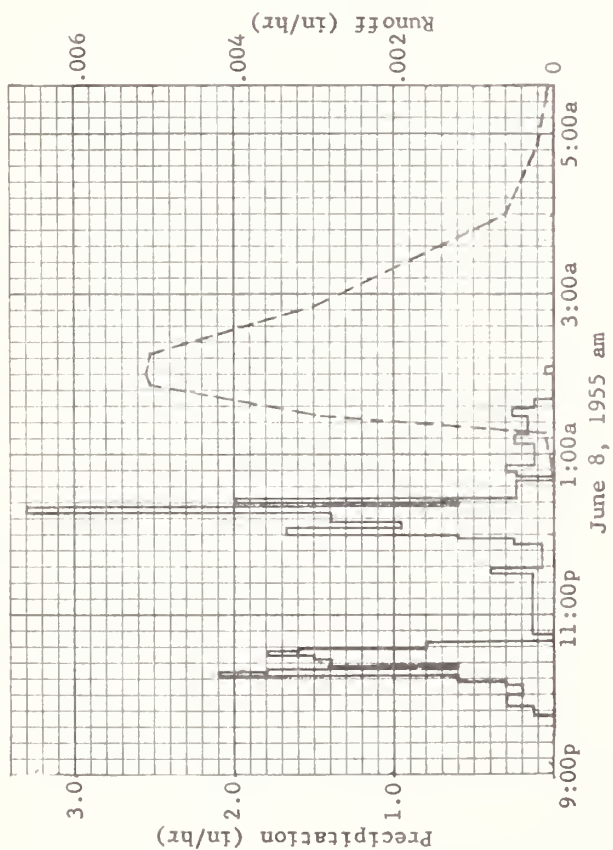
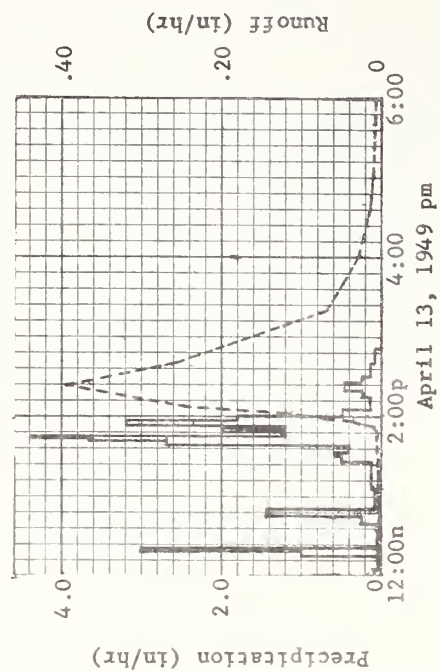
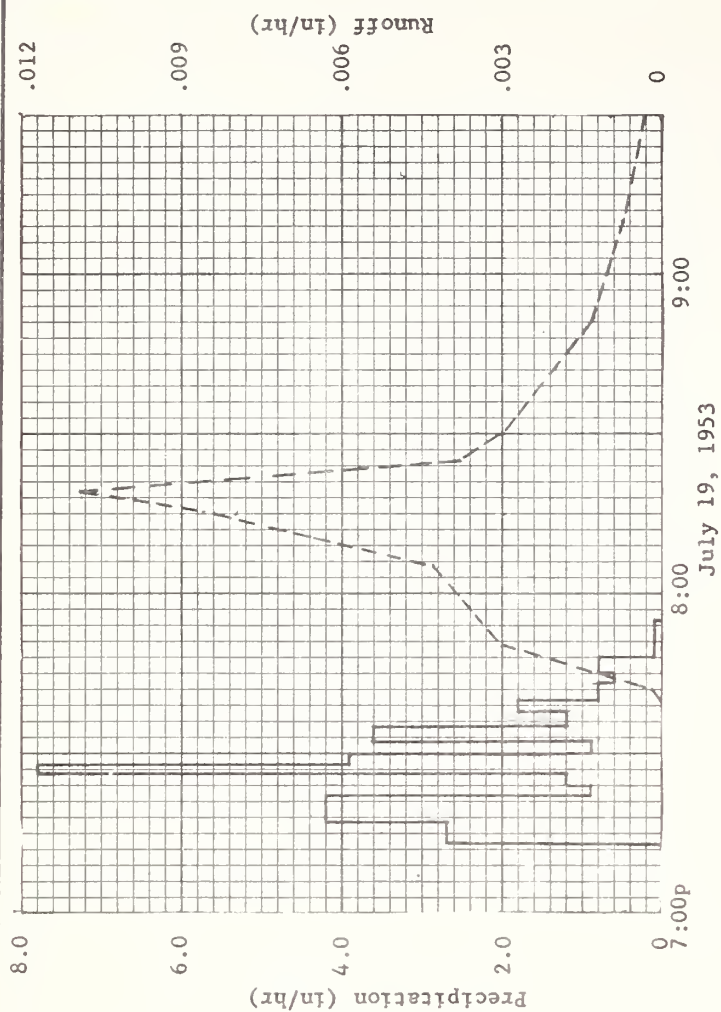
| Staunton, Virginia, Bell Creek Watershed W-I (15.1) Area - 390 acres                                                                                                                                                          |                   |                 |                                |                   |               |               |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|-------------------|---------------|---------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                         |                   |                 | Rainfall                       |                   |               | Runoff        |              |               |
| Date                                                                                                                                                                                                                          | Rainfall (inches) | Runoff (inches) | Date and time                  | Intensity (in/hr) | Acc. (inches) | Date and time | Rate (in/hr) | Acc. (inches) |
| <b>Event of September 8, 1948</b>                                                                                                                                                                                             |                   |                 |                                |                   |               |               |              |               |
| 8-11-48                                                                                                                                                                                                                       | 0.04              | 0               | 9-8-48                         | Raingage          | R-1           | 9-8-48        |              |               |
| 8-13                                                                                                                                                                                                                          | .04               | 0               | 12:20p                         | 0                 | 0             | 12:51p        | 0            | 0             |
| 8-21                                                                                                                                                                                                                          | .14               | 0               | :25                            | .12               | .01           | :56           | .0007        | 0             |
| 8-31                                                                                                                                                                                                                          | .22               | 0               | :29                            | .60               | .05           | 1:00          | .0018        | .0001         |
| 9-5                                                                                                                                                                                                                           | .53               | 0               | :32                            | 3.60              | .23           | :06           | .0030        | .0004         |
| 9-6                                                                                                                                                                                                                           | .55               | 0               | :35                            | 2.00              | .33           | :12           | .0059        | .0008         |
| 9-8                                                                                                                                                                                                                           | .01               | 0               | :40                            | 2.40              | .53           | :20           | .0041        | .0015         |
| Watershed Conditions: Cultivated 26%, common rotation is corn, small grain and hay; forest 11% mixed second growth, grazed; native pasture 63%, usually good cover of bluegrass, broom sedge, other grasses and white clover. |                   |                 | :42                            | 1.80              | .59           | :32           | .0018        | .0020         |
|                                                                                                                                                                                                                               |                   |                 | :45                            | 1.20              | .65           | :42           | .0010        | .0023         |
|                                                                                                                                                                                                                               |                   |                 | :50                            | .48               | .69           | :58           | .0005        | .0025         |
|                                                                                                                                                                                                                               |                   |                 | :55                            | .12               | .70           | 3:00          | .0001        | .0028         |
|                                                                                                                                                                                                                               |                   |                 |                                |                   |               | 4:00          | 0            | .0028         |
|                                                                                                                                                                                                                               |                   |                 | <b>Event of April 13, 1949</b> |                   |               |               |              |               |
|                                                                                                                                                                                                                               |                   |                 | 3-13-49                        | Raingage          | R-1           | 4-13-49       |              |               |
| 3-14, 16 <sup>1/</sup>                                                                                                                                                                                                        | 0                 | 0.0120          | 12:00n                         | 0                 | 0             | 10:00a        | 0.0010       | 0             |
| 3-17                                                                                                                                                                                                                          | .03               | .0120           | :05p                           | .12               | .01           | 12:28p        | .0010        | .0025         |
| 3-18                                                                                                                                                                                                                          | .82               | .0290           | :15                            | .06               | .02           | :36           | .0021        | .0027         |
| 3-19, 21                                                                                                                                                                                                                      | 0                 | .0214           | :18                            | 1.00              | .07           | :48           | .0018        | .0031         |
| 3-22                                                                                                                                                                                                                          | .71               | .0207           | :20                            | 3.00              | .17           | 1:08          | .0033        | .0039         |
| 3-23                                                                                                                                                                                                                          | .02               | .0248           | :40                            | .06               | .19           | :48           | .0053        | .0068         |
| 3-24, 25                                                                                                                                                                                                                      | 0                 | .0312           | :45                            | .24               | .21           | :52           | .0091        | .0073         |
| 3-26                                                                                                                                                                                                                          | .05               | .0144           | :50                            | 1.44              | .33           | :58           | .0381        | .0096         |
| 3-27, 4-2                                                                                                                                                                                                                     | 0                 | .0656           | 1:05                           | .08               | .35           | 2:02          | .114         | .0147         |
| 4-3                                                                                                                                                                                                                           | .15               | .0096           |                                |                   |               | :08           | .246         | .0327         |
| 4-4                                                                                                                                                                                                                           | .12               | .0107           | :25                            | .12               | .39           | :24           | .399         | .1188         |
| 4-5                                                                                                                                                                                                                           | .78               | .0230           | :30                            | .48               | .43           | :40           | .259         | .2065         |
| 4-6                                                                                                                                                                                                                           | .01               | .0197           | :35                            | .60               | .48           | 3:12          | .102         | .3024         |
| 4-7                                                                                                                                                                                                                           | .10               | .0120           | :38                            | .40               | .50           | :20           | .0711        | .3142         |
| 4-8                                                                                                                                                                                                                           | .02               | .0108           | :40                            | 2.70              | .59           | :40           | .0457        | .3337         |
| 4-9, 10                                                                                                                                                                                                                       | 0                 | .0192           | :42                            | 3.60              | .71           | 4:00          | .0305        | .3464         |
| 4-11                                                                                                                                                                                                                          | .02               | .0072           | :45                            | 4.40              | .93           | :40           | .0142        | .3613         |
| 4-12                                                                                                                                                                                                                          | .14               | .0108           | :47                            | 1.20              | .97           | 5:00          | .0109        | .3655         |
| 4-13                                                                                                                                                                                                                          | .36               | .0068           | :50                            | 2.00              | 1.07          | :40           | .0071        | .3715         |
| Watershed Conditions: Cultivated 26%, common rotation is corn, small grain and hay; forest 11% mixed second growth, grazed; native pasture 63%, usually good cover of bluegrass, broom sedge, other grasses and white clover. |                   |                 | :52                            | 1.20              | 1.11          | 7:20          | .0038        | .3806         |
|                                                                                                                                                                                                                               |                   |                 |                                |                   |               | 12:00m        | .0023        | .3948         |
|                                                                                                                                                                                                                               |                   |                 | :58                            | 3.20              | 1.43          | 4-14-49       |              |               |
|                                                                                                                                                                                                                               |                   |                 | 2:00                           | 1.80              | 1.49          | 12:00m        | .0015        | .4404         |
|                                                                                                                                                                                                                               |                   |                 | :05                            | .48               | 1.53          | 4-15-49       |              |               |
|                                                                                                                                                                                                                               |                   |                 | :15                            | .18               | 1.56          | 12:00m        | .0012        | .4728         |
|                                                                                                                                                                                                                               |                   |                 | :20                            | .24               | 1.58          | 4-16-49       |              |               |
|                                                                                                                                                                                                                               |                   |                 | :25                            | .48               | 1.62          | 12:00m        | .0011        | .5004         |
|                                                                                                                                                                                                                               |                   |                 | :30                            | .24               | 1.64          | 4-17-49       |              |               |
|                                                                                                                                                                                                                               |                   |                 | :40                            | .18               | 1.67          | 12:00n        | .0010        | .5130         |
|                                                                                                                                                                                                                               |                   |                 | :50                            | .12               | 1.69          |               |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 393.7008                                                                                                                                                                |                   |                 |                                |                   |               |               |              |               |
| <sup>1/</sup> Inclusive dates                                                                                                                                                                                                 |                   |                 |                                |                   |               |               |              |               |

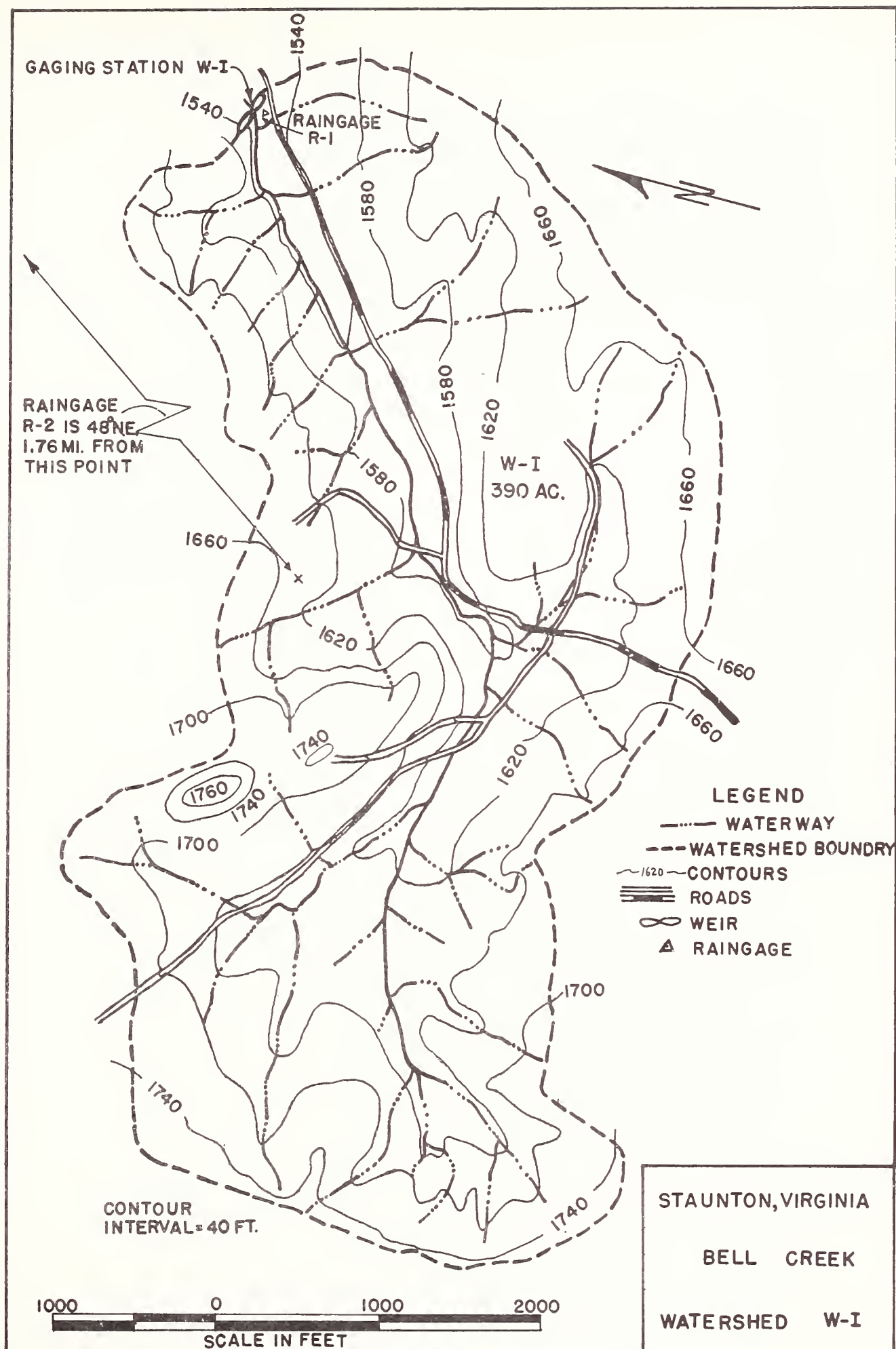


| Staunton, Virginia, Bell Creek                                                                                                                                                                                                |                      |                    | Watershed W-I    |                      |                  | (15.1)           | Area - 390 acres |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|------------------|------------------|
| Antecedent conditions                                                                                                                                                                                                         |                      |                    | Rainfall         |                      |                  | Runoff           |                  |                  |
| Date                                                                                                                                                                                                                          | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)  | Acc.<br>(inches) |
| Event of July 19, 1953                                                                                                                                                                                                        |                      |                    |                  |                      |                  |                  |                  |                  |
| 6-21-53                                                                                                                                                                                                                       | 0.36                 | 0                  | 7-19-53          | Raingage             | R-1              | 7-19-53          |                  |                  |
| 6-22                                                                                                                                                                                                                          | .02                  | 0                  | 7:13p            | 0                    | 0                | 7:40p            | 0                | 0                |
| 6-28                                                                                                                                                                                                                          | .43                  | 0                  | :17              | 2.70                 | .18              | :42              | .0002            | 0                |
| 6-29                                                                                                                                                                                                                          | .29                  | 0                  | :22              | 4.20                 | .53              | :50              | .0030            | .0002            |
| 7-1                                                                                                                                                                                                                           | .29                  | 0                  | :24              | .90                  | .56              | :55              | .0028            | .0004            |
| 7-2                                                                                                                                                                                                                           | .17                  | 0                  | :26              | 1.20                 | .60              | :58              | .0030            | .0006            |
| 7-5                                                                                                                                                                                                                           | .19                  | 0                  | :28              | 7.80                 | .86              | 8:05             | .0043            | .0010            |
| 7-6                                                                                                                                                                                                                           | .11                  | 0                  | :30              | 3.90                 | .99              | :15              | .0084            | .0021            |
| 7-9                                                                                                                                                                                                                           | .30                  | 0                  | :32              | .90                  | 1.02             | :19              | .0109            | .0027            |
| 7-10                                                                                                                                                                                                                          | .02                  | 0                  | :35              | 3.60                 | 1.20             | :25              | .0038            | .0035            |
| 7-19                                                                                                                                                                                                                          | .56                  | 0                  | :38              | 1.20                 | 1.26             | :30              | .0030            | .0037            |
| Watershed Conditions: Cultivated 26%, common rotation is corn, small grain and hay; forest 11% mixed second growth, grazed; native pasture 63%, usually good cover of bluegrass, broom sedge, other grasses and white clover. |                      |                    | :40              | 1.80                 | 1.32             | :50              | .0014            | .0045            |
|                                                                                                                                                                                                                               |                      |                    | :43              | .80                  | 1.36             | 9:10             | .0007            | .0048            |
|                                                                                                                                                                                                                               |                      |                    | :45              | .60                  | 1.38             | :30              | .0003            | .0050            |
|                                                                                                                                                                                                                               |                      |                    | :48              | .80                  | 1.42             | 11:20            | 0                | .0053            |
|                                                                                                                                                                                                                               |                      |                    | :55              | .09                  | 1.43             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    |                  |                      |                  |                  |                  |                  |
| Event of June 7 & 8, 1955                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                  |                  |
| 5-12-55                                                                                                                                                                                                                       | 0.04                 | 0                  | 6-7-55           | Raingage             | R-2              | 6-8-55           |                  |                  |
| 5-13                                                                                                                                                                                                                          | .74                  | T                  | 9:45p            | 0                    | 0                | 12:45a           | 0                | 0                |
| 5-14                                                                                                                                                                                                                          | .28                  | T                  | :50              | .12                  | .01              | :50              | .0001            | 0                |
| 5-20                                                                                                                                                                                                                          | .08                  | 0                  | 10:00            | .30                  | .06              | 1:10             | .0014            | .0002            |
| 5-21                                                                                                                                                                                                                          | .01                  | 0                  | :06              | .20                  | .08              | :30              | .0030            | .0010            |
| 5-22                                                                                                                                                                                                                          | .87                  | 0                  | :08              | .30                  | .09              | :50              | .0051            | .0023            |
| 5-23                                                                                                                                                                                                                          | .03                  | 0                  |                  |                      |                  | 2:00             | .0053            | .0032            |
| 5-29                                                                                                                                                                                                                          | .28                  | 0                  | :14              | .60                  | .15              | :15              | .0051            | .0045            |
| 6-7                                                                                                                                                                                                                           | .69                  | 0                  | :16              | 2.10                 | .22              | :50              | .0030            | .0069            |
|                                                                                                                                                                                                                               |                      |                    | :18              | 1.80                 | .28              | 4:00             | .0006            | .0090            |
|                                                                                                                                                                                                                               |                      |                    | :20              | .60                  | .30              | :50              | .0002            | .0093            |
|                                                                                                                                                                                                                               |                      |                    | :26              | 1.40                 | .44              | 5:30             | .0001            | .0094            |
|                                                                                                                                                                                                                               |                      |                    | :28              | 1.50                 | .49              | 6:05             | 0                | .0094            |
|                                                                                                                                                                                                                               |                      |                    | :31              | 1.80                 | .58              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :34              | 1.60                 | .66              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :40              | .80                  | .74              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :45              | 0                    | .74              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | 11:32            | .13                  | .84              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :35              | .40                  | .86              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :53              | .07                  | .88              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :58              | .24                  | .90              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | 12:00m           | .60                  | .92              |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | 6-8-55           |                      |                  |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | 12:05a           | 1.68                 | 1.06             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :10              | .96                  | 1.14             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :16              | 1.40                 | 1.28             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :20              | 3.30                 | 1.50             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :22              | .60                  | 1.52             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :25              | 2.00                 | 1.62             |                  |                  |                  |
|                                                                                                                                                                                                                               |                      |                    | :30              | .24                  | 1.64             |                  |                  |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 393.7008                                                                                                                                                                |                      |                    |                  |                      |                  |                  |                  |                  |

| Staunton, Virginia, Bell Creek                                                                                                                                                                                                                           |                      |                    | Watershed W-I    |                      |                  | (15.1)           | Area - 390 acres |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|------------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                    |                      |                    | Rainfall         |                      |                  | Runoff           |                  |                  |
| Date                                                                                                                                                                                                                                                     | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)  | Acc.<br>(inches) |
| <u>Watershed Conditions:</u> Culti-<br>vated 26%, common rotation is<br>corn, small grain and hay; forest<br>11% mixed second growth, grazed;<br>native pasture 63%, usually good<br>cover of bluegrass, broom sedge,<br>other grasses and white clover. |                      |                    | :40              | .24                  | 1.68             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :42              | 0                    | 1.68             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :47              | .24                  | 1.70             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :51              | .30                  | 1.72             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | 1:08             | .11                  | 1.75             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :13              | .24                  | 1.77             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :28              | .16                  | 1.81             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :35              | .26                  | 1.84             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :40              | .12                  | 1.85             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | 2:00             | 0                    | 1.85             |                  |                  |                  |
|                                                                                                                                                                                                                                                          |                      |                    | :10              | .06                  | 1.86             |                  |                  |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 393.7008                                                                                                                                                                                           |                      |                    |                  |                      |                  |                  |                  |                  |

Staunton, Virginia, Bell Creek Watershed W-I









| Edwardsville, Illinois                                                                                                                                                             |                      |                    | Watershed W-1 <sup>1/</sup> (17.1) |                      |                  | Area - 27.22 acres |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------------------|----------------------|------------------|--------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                              |                      |                    | Rainfall                           |                      |                  | Runoff             |                 |                  |
| Date                                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time                   | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time   | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 27, 1938                                                                                                                                                              |                      |                    |                                    |                      |                  |                    |                 |                  |
| 4-27-38                                                                                                                                                                            | .02                  | 0                  | 5-27-38                            | Raingage             | R-2              | 5-27-38            |                 |                  |
| 4-28                                                                                                                                                                               | .04                  | 0                  | 2:50p                              | 0                    | 0                | 2:55p              | .0005           | 0                |
| 4-29                                                                                                                                                                               | .23                  | 0                  | :57                                | .17                  | .02              | 3:05               | .0037           | .001             |
| 4-30                                                                                                                                                                               | .10                  | 0                  | 3:01                               | 3.00                 | .22              | :07                | .0318           | .001             |
| 5-4                                                                                                                                                                                | .30                  | .001               | :04                                | .60                  | .23              | :09                | .0580           | .003             |
| 5-7                                                                                                                                                                                | 1.14                 | .023               | :08                                | .75                  | .28              | :12                | .0826           | .006             |
| 5-14                                                                                                                                                                               | .06                  | 0                  | :11                                | .20                  | .29              | :15                | .205            | .013             |
| 5-16                                                                                                                                                                               | .05                  | 0                  | :14                                | 2.00                 | .39              | :16                | .334            | .017             |
| 5-17                                                                                                                                                                               | .17                  | 0                  | :17                                | 7.20                 | .75              | :17                | .646            | .025             |
| 5-19                                                                                                                                                                               | .11                  | 0                  | :20                                | 5.40                 | 1.02             | :18                | 1.35            | .042             |
| 5-21                                                                                                                                                                               | .17                  | 0                  | :23                                | 5.00                 | 1.27             | :20                | 1.87            | .096             |
| 5-22                                                                                                                                                                               | .35                  | 0                  | :26                                | 2.40                 | 1.39             | :22                | 2.34            | .167             |
| 5-23                                                                                                                                                                               | 1.22                 | .054               | :32                                | .50                  | 1.44             | :23                | 2.41            | .207             |
| 5-27                                                                                                                                                                               | .39                  | .001               | :40                                | .08                  | 1.45             | :25                | 2.30            | .285             |
| Watershed Conditions: 17% of<br>area was in winter wheat, 52% in<br>oats sowed April 5 and seeded to<br>alfalfa, 27% in corn planted on<br>May 26, and 4% in permanent<br>pasture. |                      |                    |                                    |                      |                  | :27                | 1.88            | .354             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :30                | 1.43            | .435             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :33                | 1.02            | .497             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :36                | .681            | .539             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :42                | .386            | .592             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :46                | .270            | .613             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :50                | .192            | .629             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 4:00               | .0940           | .652             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :20                | .0326           | .671             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | :45                | .0114           | .679             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 5:00               | .0073           | .682             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 6:00               | .0016           | .685             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 9:00               | .0006           | .688             |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 5-28-38            |                 |                  |
|                                                                                                                                                                                    |                      |                    |                                    |                      |                  | 5:00a              | T               | .691             |
| Notes: <sup>1/</sup> To convert runoff in in/hr to ofs, multiply by 27.446.<br>Watershed map included with Edwardsville, Illinois Watershed W-4                                    |                      |                    |                                    |                      |                  |                    |                 |                  |

| Edwardsville, Illinois                                                                                                                                             |                      |                    | Watershed W-1    |                      |                  | (17.1) Area - 27.22 acres |                 |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                              |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 21, 1942                                                                                                                                             |                      |                    |                  |                      |                  |                           |                 |                  |
| 5-23-42                                                                                                                                                            | .13                  | 0                  | 6-21-42          | Raingage             | R-2              | 6-21-42                   |                 |                  |
| 5-26                                                                                                                                                               | .06                  | 0                  | 12:02a           | 0                    | 0                | 12:03a                    | 0               | 0                |
| 5-31                                                                                                                                                               | .36                  | 0                  | :05              | 3.80                 | .19              | :22                       | .0192           | .002             |
| 6-1                                                                                                                                                                | .56                  | .006               | :14              | .87                  | .32              | :25                       | .0326           | .003             |
| 6-6                                                                                                                                                                | .12                  | 0                  | :20              | 3.00                 | .62              | :28                       | .0676           | .005             |
| 6-7                                                                                                                                                                | .10                  | 0                  | :24              | 1.65                 | .73              | :32                       | .161            | .013             |
| 6-9                                                                                                                                                                | .29                  | 0                  | :30              | 3.20                 | 1.05             | :36                       | .299            | .028             |
| 6-10                                                                                                                                                               | .05                  | 0                  | 1:00             | .26                  | 1.18             | :40                       | .386            | .051             |
| 6-11                                                                                                                                                               | .15                  | 0                  | :30              | .04                  | 1.20             | :43                       | .397            | .071             |
| 6-13                                                                                                                                                               | 1.34                 | .144               | 2:40             | .13                  | 1.35             | :50                       | .336            | .114             |
| 6-15                                                                                                                                                               | .24                  | 0                  |                  |                      |                  | 1:00                      | .228            | .160             |
| 6-16                                                                                                                                                               | .01                  | 0                  |                  |                      |                  | :10                       | .163            | .192             |
| 6-18                                                                                                                                                               | .51                  | .003               |                  |                      |                  | :20                       | .123            | .216             |
| 6-19                                                                                                                                                               | .11                  | 0                  |                  |                      |                  | 2:00                      | .0448           | .266             |
| 6-20                                                                                                                                                               | .01                  | 0                  |                  |                      |                  | 3:00                      | .0139           | .294             |
| Watershed Conditions: 96% of area was in alfalfa, 27% of which was 18 inches high, 52% 36 inches high, and 17% 6 inches high; 4% of area was in permanent pasture. |                      |                    |                  |                      |                  | 4:00                      | .0036           | .302             |
|                                                                                                                                                                    |                      |                    |                  |                      |                  | 6:30                      | 0               | .305             |
| Notes: To convert runoff in in/hr to cfs, multiply by 27.446.                                                                                                      |                      |                    |                  |                      |                  |                           |                 |                  |

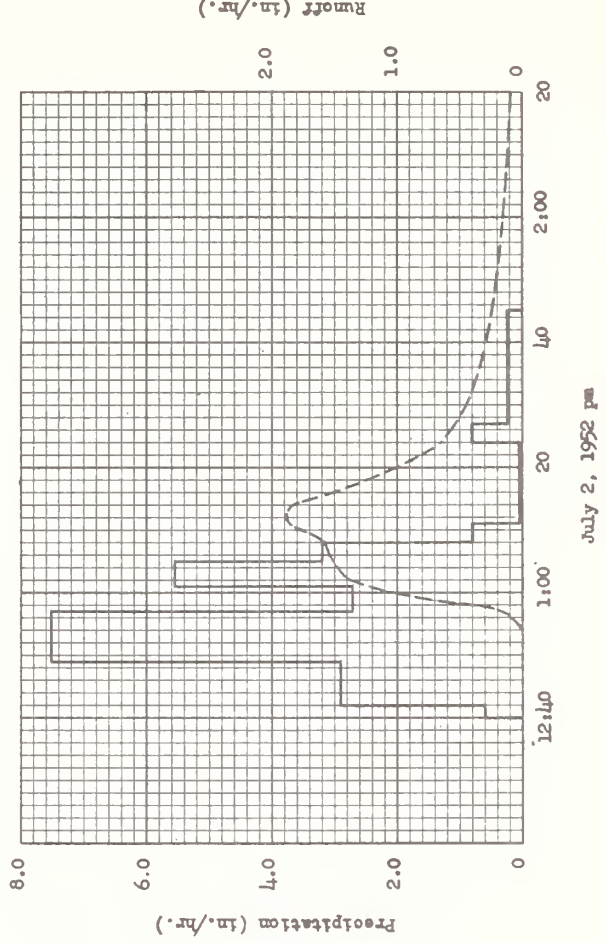
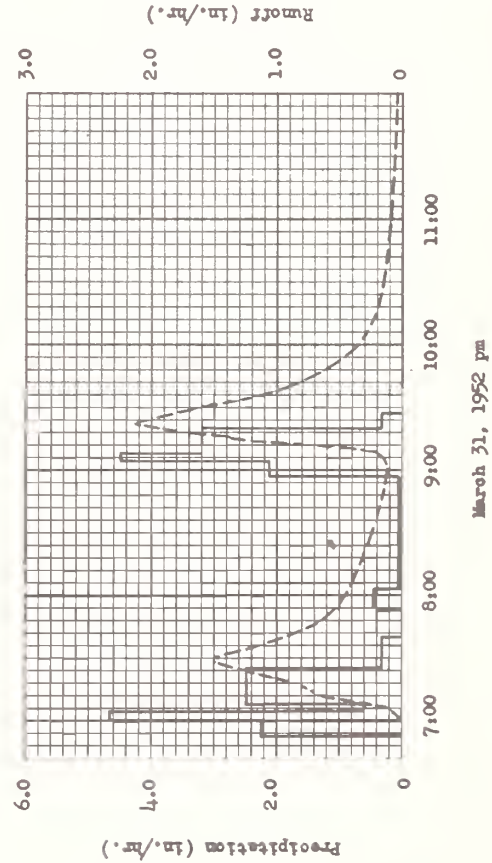
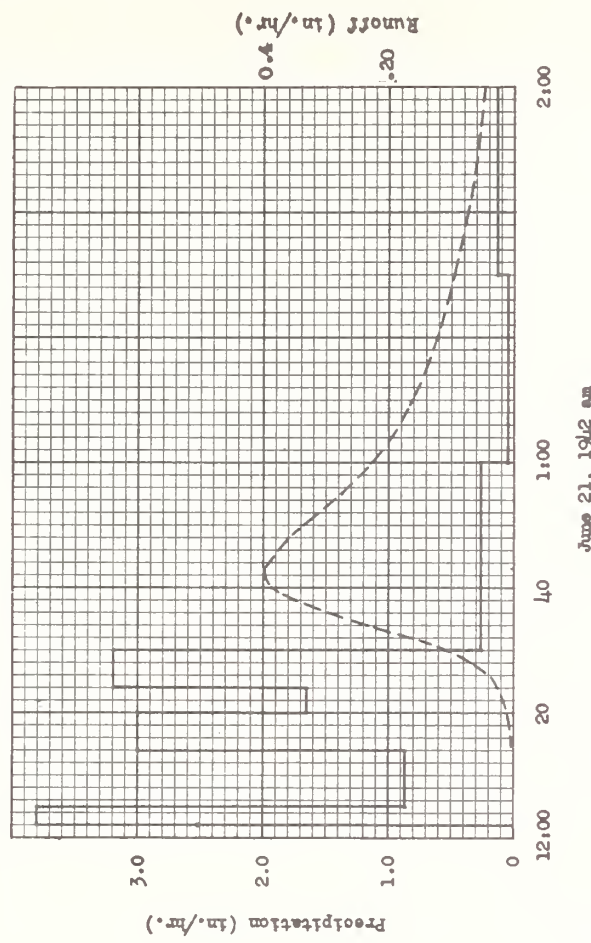
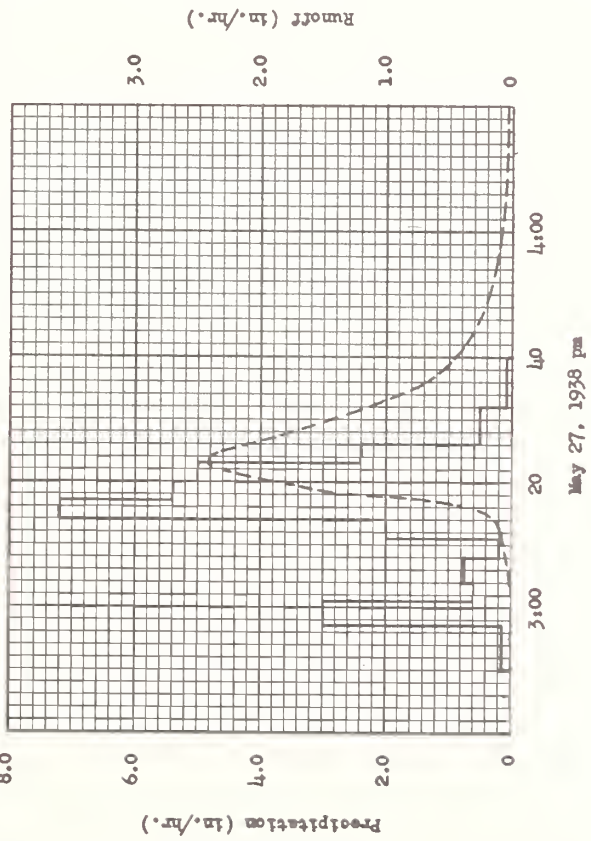
| Edwardsville, Illinois                                                                                               |                      |                    | Watershed W-1    |                      |                  | (17.1) Area - 27.22 acres |                 |                  |  |  |  |       |       |       |
|----------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|--|--|--|-------|-------|-------|
| Antecedent conditions                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |  |  |  |       |       |       |
| Date                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |  |  |  |       |       |       |
| Event of March 31, 1952                                                                                              |                      |                    |                  |                      |                  |                           |                 |                  |  |  |  |       |       |       |
| 3-2-52                                                                                                               | .20                  | 0                  | 3-31-52          | Raingage             | R-2              | 3-31-52                   |                 |                  |  |  |  |       |       |       |
| 3-3                                                                                                                  | .09                  | .050               | 6:52p            | 0                    | 0                | 5:30p                     | .0002           | 0                |  |  |  |       |       |       |
| 3-4                                                                                                                  | .04                  | .015               | 7:00             | 2.25                 | .30              | 7:00                      | .0081           | .002             |  |  |  |       |       |       |
| 3-10                                                                                                                 | 1.42                 | .782               | :04              | 4.65                 | .61              | :04                       | .0626           | .004             |  |  |  |       |       |       |
| 3-11                                                                                                                 | 0                    | .158               | :08              | .60                  | .65              | :08                       | .257            | .014             |  |  |  |       |       |       |
| 3-12                                                                                                                 | .13                  | .012               | :25              | 2.47                 | 1.35             | :12                       | .662            | .0449            |  |  |  |       |       |       |
| 3-17                                                                                                                 | .35                  | 0                  | :40              | .32                  | 1.43             | :18                       | .876            | .123             |  |  |  |       |       |       |
| 3-18                                                                                                                 | .57                  | .580               | :53              | 0                    | 1.43             | :24                       | 1.23            | .226             |  |  |  |       |       |       |
| 3-19                                                                                                                 | 0                    | .032               | 8:03             | .42                  | 1.50             | :27                       | 1.44            | .293             |  |  |  |       |       |       |
| 3-21                                                                                                                 | .04                  | 0                  | :57              | .06                  | 1.55             | :29                       | 1.51            | .342             |  |  |  |       |       |       |
| 3-22                                                                                                                 | .29                  | .080               | 9:04             | 2.14                 | 1.80             | :32                       | 1.40            | .415             |  |  |  |       |       |       |
| 3-31                                                                                                                 | .25                  | 0                  | :08              | 4.50                 | 2.10             | :36                       | 1.19            | .501             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    | :20              | 3.20                 | 2.74             | :42                       | .881            | .605             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    | :27              | .34                  | 2.78             | :48                       | .648            | .681             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :54                       | .506            | .738             |  |  |  |       |       |       |
| Watershed Conditions: 4% of area was in permanent pasture, 17% in clover, 27% in wheat, and 52% in rotation pasture. |                      |                    |                  |                      |                  | 8:00                      | .451            | .785             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :10                       | .393            | .856             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :20                       | .304            | .914             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :30                       | .233            | .959             |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :42                       | .181            | 1.000            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | 9:00                      | .125            | 1.045            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :05                       | .137            | 1.056            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :09                       | .250            | 1.068            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :12                       | .641            | 1.088            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :14                       | 1.17            | 1.118            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :16                       | 1.39            | 1.161            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :18                       | 1.66            | 1.211            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :20                       | 1.93            | 1.271            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :22                       | 2.12            | 1.339            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :24                       | 2.05            | 1.408            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :28                       | 1.74            | 1.536            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :33                       | 1.34            | 1.664            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :39                       | .948            | 1.779            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :48                       | .608            | 1.893            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | 10:00                     | .359            | 1.987            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :10                       | .246            | 2.037            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :20                       | .189            | 2.073            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | :30                       | .149            | 2.101            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | 11:00                     | .0874           | 2.159            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | 12:00                     | .0408           | 2.219            |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  | 4-1-52                    |                 |                  |  |  |  |       |       |       |
|                                                                                                                      |                      |                    |                  |                      |                  |                           |                 |                  |  |  |  | 2:00a | .0137 | 2.267 |
|                                                                                                                      |                      |                    |                  |                      |                  |                           |                 |                  |  |  |  | 6:00  | .0040 | 2.299 |
|                                                                                                                      |                      |                    |                  |                      |                  |                           |                 |                  |  |  |  | 12:00 | .0010 | 2.313 |

Notes: To convert runoff in in/hr to cfs, multiply by 27.446 .

Notes: To convert runoff in in/hr to cfs, multiply by 27.446.



| Edwardsville, Illinois                                                                                                       |                      |                    | Watershed W-1    |                      |                  | (17.1) Area - 27.22 acres |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                        |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                                                                                                                         | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of July 2, 1952                                                                                                        |                      |                    |                  |                      |                  |                           |                 |                  |
| 6-9-52                                                                                                                       | 4.08                 | 1.300e             | 7-2-52           | Raingage             | R-2              | 7-2-52                    |                 |                  |
| 6-10                                                                                                                         | .53                  | .870e              | 12:40p           | 0                    | 0                | 12:54p                    | 0               | 0                |
| 6-20                                                                                                                         | .14                  | 0                  | :42              | .60                  | .02              | :56                       | .1000           | .002             |
| 7-2                                                                                                                          | .64                  | 0                  | :49              | 2.91                 | .36              | :58                       | .378            | .010             |
|                                                                                                                              |                      |                    | :53              | 7.50                 | .86              | 1:00                      | 1.05            | .033             |
|                                                                                                                              |                      |                    | :57              | 7.50                 | 1.36             | :02                       | 1.37            | .074             |
|                                                                                                                              |                      |                    | 1:01             | 2.70                 | 1.54             | :04                       | 1.48            | .121             |
|                                                                                                                              |                      |                    | :05              | 5.55                 | 1.91             | :06                       | 1.54            | .172             |
|                                                                                                                              |                      |                    | :08              | 3.20                 | 2.07             | :08                       | 1.57            | .223             |
|                                                                                                                              |                      |                    | :11              | .80                  | 2.11             | :10                       | 1.74            | .279             |
|                                                                                                                              |                      |                    | :24              | .05                  | 2.12             | :12                       | 1.87            | .339             |
|                                                                                                                              |                      |                    | :27              | .80                  | 2.16             | :14                       | 1.83            | .401             |
|                                                                                                                              |                      |                    | :45              | .23                  | 2.23             | :16                       | 1.51            | .456             |
|                                                                                                                              |                      |                    |                  |                      |                  | :18                       | 1.25            | .502             |
|                                                                                                                              |                      |                    |                  |                      |                  | :21                       | .873            | .555             |
|                                                                                                                              |                      |                    |                  |                      |                  | :24                       | .652            | .593             |
|                                                                                                                              |                      |                    |                  |                      |                  | :30                       | .444            | .647             |
|                                                                                                                              |                      |                    |                  |                      |                  | :36                       | .335            | .686             |
|                                                                                                                              |                      |                    |                  |                      |                  | :48                       | .218            | .741             |
|                                                                                                                              |                      |                    |                  |                      |                  | 2:00                      | .146            | .777             |
|                                                                                                                              |                      |                    |                  |                      |                  | :24                       | .0735           | .821             |
|                                                                                                                              |                      |                    |                  |                      |                  | 3:00                      | .0251           | .849             |
|                                                                                                                              |                      |                    |                  |                      |                  | 4:00                      | .0051           | .861             |
|                                                                                                                              |                      |                    |                  |                      |                  | 5:00                      | .0011           | .864             |
|                                                                                                                              |                      |                    |                  |                      |                  | 6:30                      | .0001           | .865             |
| Watershed Conditions: 4% of area was in permanent pasture, 17% in clover, 27% in wheat stubble, and 52% in rotation pasture. |                      |                    |                  |                      |                  |                           |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 27.446 .<br>e - Estimated by comparison with other areas.              |                      |                    |                  |                      |                  |                           |                 |                  |



EDWARDSVILLE, ILLINOIS WATERSHED W-1



| Edwardsville, Illinois                                                                                                                                                                            |                      |                    | Watershed W-4    |                      |                  | (17.4) Area - 289.8 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                             |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                                                                                                                                                                                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 27, 1938                                                                                                                                                                             |                      |                    |                  |                      |                  |                           |                 |                  |
| 4-28-38                                                                                                                                                                                           | .03                  | .0011              | 5-27-38          | Raingage             | R-4              | 5-27-38                   |                 |                  |
| 4-29                                                                                                                                                                                              | .21                  | .0010              | 2:45p            | 0                    | 0                | 2:50p                     | .0005           | 0                |
| 4-30                                                                                                                                                                                              | .11                  | .0044              | :50              | .36                  | .03              | 3:05                      | .0058           | .0011            |
| 5-1                                                                                                                                                                                               | 0                    | .0012              | :56              | 2.70                 | .30              | :10                       | .0103           | .0018            |
| 5-2                                                                                                                                                                                               | 0                    | .0010              | 3:01             | .12                  | .31              | :14                       | .0265           | .0029            |
| 5-3                                                                                                                                                                                               | 0                    | .0007              | :03              | 1.20                 | .35              | :18                       | .0677           | .0060            |
| 5-4                                                                                                                                                                                               | .27                  | .0005              | :06              | .40                  | .37              | :21                       | .0834           | .0096            |
| 5-5 to 6                                                                                                                                                                                          | 0                    | .0010              | :09              | 2.60                 | .50              | :24                       | .228            | .0174            |
| 5-7                                                                                                                                                                                               | 1.14                 | .0828              | :12              | 5.00                 | .75              | :27                       | .505            | .0347            |
| 5-8                                                                                                                                                                                               | 0                    | .0038              | :17              | 3.00                 | 1.00             | :30                       | .825            | .0660            |
| 5-9                                                                                                                                                                                               | 0                    | .0016              | :19              | 4.50                 | 1.15             | :32                       | 1.02            | .0974            |
| 5-10                                                                                                                                                                                              | 0                    | .0008              | :22              | 2.00                 | 1.25             | :34                       | 1.06            | .1321            |
| 5-11                                                                                                                                                                                              | 0                    | .0011              | :35              | .23                  | 1.30             | :36                       | 1.06            | .1674            |
| 5-12                                                                                                                                                                                              | 0                    | .0010              |                  |                      |                  | :42                       | .825            | .2613            |
| 5-13                                                                                                                                                                                              | 0                    | .0014              |                  |                      |                  | :48                       | .627            | .3338            |
| 5-14                                                                                                                                                                                              | .06                  | .0013              |                  | Total Rainfall       |                  | :54                       | .433            | .3863            |
| 5-15                                                                                                                                                                                              | 0                    | .0006              |                  | R-1                  | 1.40             | 4:00                      | .311            | .4229            |
| 5-16                                                                                                                                                                                              | .05                  | .0004              |                  | R-2                  | 1.45             | :12                       | .188            | .4616            |
| 5-17                                                                                                                                                                                              | .18                  | .0019              |                  | R-3                  | 1.29             | :20                       | .143            | .4835            |
| 5-18                                                                                                                                                                                              | 0                    | .0015              |                  | R-5                  | 1.33             | :30                       | .109            | .5045            |
|                                                                                                                                                                                                   |                      |                    |                  | R-6                  | 1.49             |                           |                 |                  |
| 5-19                                                                                                                                                                                              | .13                  | .0014              |                  | R-7                  | 1.36             | 5:00                      | .0609           | .5453            |
| 5-20                                                                                                                                                                                              | 0                    | .0008              |                  |                      |                  | 6:00                      | .0310           | .5885            |
| 5-21                                                                                                                                                                                              | .22                  | .0027              |                  | Weighted Average     | 1.375            | 7:00                      | .0135           | .6124            |
| 5-22                                                                                                                                                                                              | .35                  | .0090              |                  |                      |                  | 8:00                      | .0059           | .6210            |
| 5-23                                                                                                                                                                                              | 1.27                 | .1336              |                  |                      |                  | 12:00                     | .0019           | .6335            |
| 5-24                                                                                                                                                                                              | 0                    | .0075              |                  |                      |                  | 5-28-38                   |                 |                  |
| 5-25                                                                                                                                                                                              | 0                    | .0031              |                  |                      |                  | 6:00a                     | .0011           | .6417            |
| 5-26                                                                                                                                                                                              | 0                    | .0019              |                  |                      |                  | 12:00                     | .0008           | .6470            |
| 5-27                                                                                                                                                                                              | .43                  | .0253              |                  |                      |                  |                           |                 |                  |
| Watershed Conditions: 25.8% of area was in small grain (oats and winter wheat), 6.1% in corn, 46.1% in pasture, 13.9% in hay, 5.8% in ungrazed woods, 4.8% in grazed woods, and 2% in farmsteads. |                      |                    |                  |                      |                  |                           |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 292.205 .                                                                                                                                   |                      |                    |                  |                      |                  |                           |                 |                  |



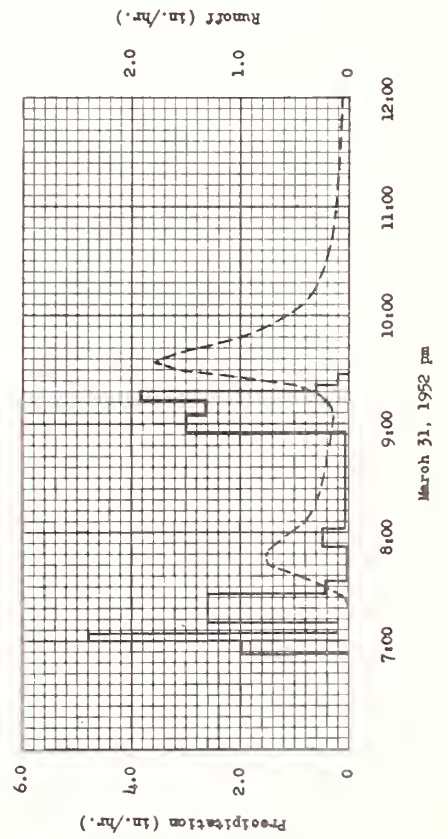
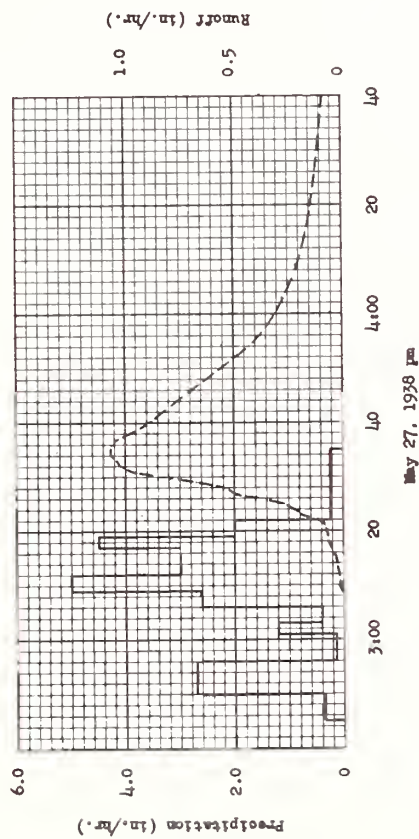
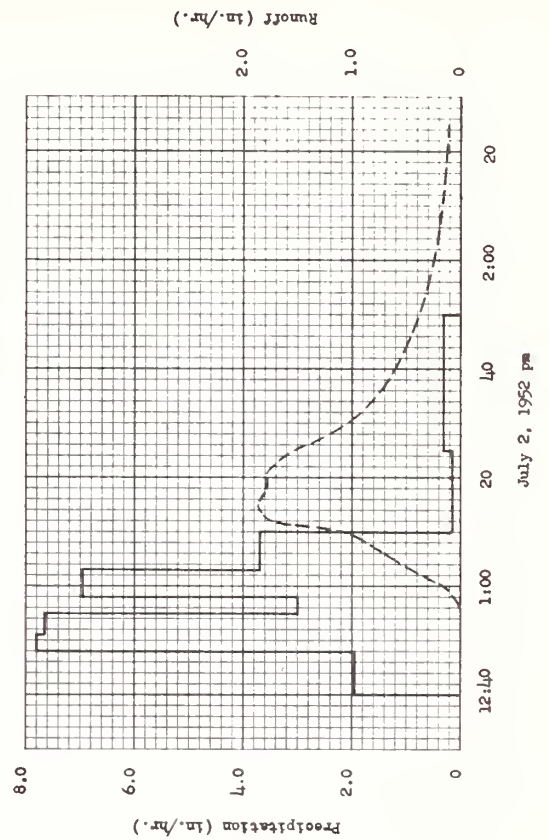
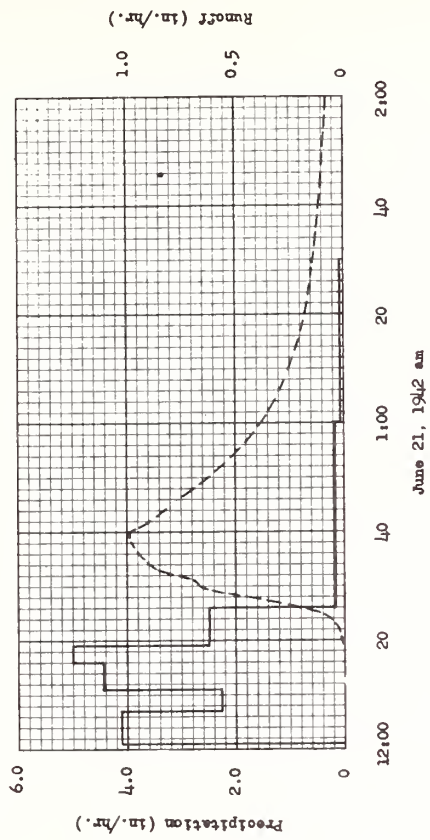
| Edwardsville, Illinois                                                                                                                                                                                                                  |                      |                    | Watershed W-4    |                      |                  | (17.4)           |                 |                  | Area - 289.8 acres |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|--------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                    |  |  |
| Date                                                                                                                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                    |  |  |
| Event of June 21, 1942                                                                                                                                                                                                                  |                      |                    |                  |                      |                  |                  |                 |                  |                    |  |  |
| 5-22-42                                                                                                                                                                                                                                 | 0                    | .0041              | 6-21-42          | Raingage             | R-7              | 6-21-42          |                 |                  |                    |  |  |
| 5-23                                                                                                                                                                                                                                    | .14                  | .0029              | 12:01a           | 0                    | 0                | 12:04a           | .0007           | 0                |                    |  |  |
| 5-24                                                                                                                                                                                                                                    | 0                    | .0038              | :07              | 4.10                 | .41              | :20              | .0110           | .0010            |                    |  |  |
| 5-25                                                                                                                                                                                                                                    | 0                    | .0024              | :11              | 2.25                 | .56              | :24              | .0551           | .0029            |                    |  |  |
| 5-26                                                                                                                                                                                                                                    | .06                  | .0024              | :16              | 4.44                 | .93              | :26              | .202            | .0069            |                    |  |  |
| 5-27                                                                                                                                                                                                                                    | 0                    | .0017              | :19              | 5.00                 | 1.18             | :28              | .450            | .0178            |                    |  |  |
| 5-28                                                                                                                                                                                                                                    | 0                    | .0005              | :26              | 2.48                 | 1.47             | :30              | .664            | .0369            |                    |  |  |
| 5-31                                                                                                                                                                                                                                    | .37                  | .0047              | 1:00             | .16                  | 1.56             | :32              | .754            | .0602            |                    |  |  |
| 6-1                                                                                                                                                                                                                                     | .57                  | .0610              | :30              | .06                  | 1.59             | :34              | .898            | .0882            |                    |  |  |
| 6-2                                                                                                                                                                                                                                     | 0                    | .0014              | 2:40             | .13                  | 1.74             | :38              | .980            | .1505            |                    |  |  |
| 6-3                                                                                                                                                                                                                                     | 0                    | .0002              | Total Rainfall   |                      |                  | :40              | .980            | .1829            |                    |  |  |
| 6-6                                                                                                                                                                                                                                     | .11                  | 0                  | R-1              |                      |                  | 1.35             | :42             | .893             | .2140              |  |  |
| 6-7                                                                                                                                                                                                                                     | .07                  | .0003              | R-2              |                      |                  | 1.35             | :48             | .688             | .2941              |  |  |
| 6-8                                                                                                                                                                                                                                     | 0                    | .0001              | R-3              |                      |                  | 1.75             | :55             | .492             | .3629              |  |  |
| 6-9                                                                                                                                                                                                                                     | .29                  | .0024              | R-4              |                      |                  | 1.85             | 1:00            | .381             | .3993              |  |  |
| 6-10                                                                                                                                                                                                                                    | .06                  | .0012              | R-5              |                      |                  | 1.90             |                 |                  |                    |  |  |
| 6-11                                                                                                                                                                                                                                    | .17                  | .0010              | R-6              |                      |                  | 1.84             | :10             | .254             | .4511              |  |  |
| 6-12                                                                                                                                                                                                                                    | 0                    | .0007              | Weighted Average |                      |                  | 1.64             | :20             | .182             | .4871              |  |  |
| 6-13                                                                                                                                                                                                                                    | 1.37                 | .3912              |                  |                      |                  |                  | :40             | .109             | .5340              |  |  |
| 6-14                                                                                                                                                                                                                                    | 0                    | .0057              |                  |                      |                  |                  | 2:00            | .0765            | .5643              |  |  |
| 6-15                                                                                                                                                                                                                                    | .26                  | .0042              |                  |                      |                  |                  | 3:00            | .0363            | .6168              |  |  |
| 6-16                                                                                                                                                                                                                                    | .02                  | .0065              |                  |                      |                  |                  | 4:00            | .0181            | .6434              |  |  |
| 6-17                                                                                                                                                                                                                                    | 0                    | .0024              |                  |                      |                  |                  | 5:30            | .0070            | .6610              |  |  |
| 6-18                                                                                                                                                                                                                                    | .53                  | .0595              |                  |                      |                  |                  | 8:30            | .0029            | .6747              |  |  |
| 6-19                                                                                                                                                                                                                                    | .14                  | .0139              |                  |                      |                  |                  | 12:00           | .0018            | .6827              |  |  |
| 6-20                                                                                                                                                                                                                                    | 0                    | .0030              |                  |                      |                  |                  |                 |                  |                    |  |  |
| Watershed Conditions: 12.4% of area was in small grain (20" to 36"), 6.6% in corn 10" high, 48.7% in pasture, 19.9% in hay (1/3 had first cutting, rest 24" to 36"), 5.8% in ungrazed woods, 4.8% in grazed woods, and 2% in farmsteads |                      |                    |                  |                      |                  |                  |                 |                  |                    |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 292.205 .                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                    |  |  |

| Edwardsville, Illinois                                                                                                                                                  |                   |                 | Watershed W-4       |                   |               | (17.4)        |              |               | Area - 289.8 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|---------------------|-------------------|---------------|---------------|--------------|---------------|--------------------|--|--|
| Antecedent conditions                                                                                                                                                   |                   |                 | Rainfall            |                   |               | Runoff        |              |               |                    |  |  |
| Date                                                                                                                                                                    | Rainfall (inches) | Runoff (inches) | Date and time       | Intensity (in/hr) | Acc. (inches) | Date and time | Rate (in/hr) | Acc. (inches) |                    |  |  |
| Event of March 31, 1952                                                                                                                                                 |                   |                 |                     |                   |               |               |              |               |                    |  |  |
| 3-1-52                                                                                                                                                                  | 0                 | .0144           | 3-31-52             | Raingage          | R-4a          | 3-31-52       |              |               |                    |  |  |
| 3-2                                                                                                                                                                     | .21               | .0189           | 6:53p               | 0                 | 0             | 6:55p         | .0011        | 0             |                    |  |  |
| 3-3                                                                                                                                                                     | .10               | .0240           | 7:00                | 1.97              | .23           | 7:20          | .0095        | .0014         |                    |  |  |
| 3-4                                                                                                                                                                     | .04               | .0665           | :04                 | 4.80              | .55           | :24           | .0544        | .0031         |                    |  |  |
| 3-9                                                                                                                                                                     | 0                 | .0190           | :10                 | .20               | .57           | :30           | .279         | .0209         |                    |  |  |
| 3-10                                                                                                                                                                    | 1.44              | .5280           | :26                 | 2.59              | 1.26          | :36           | .465         | .0579         |                    |  |  |
| 3-11                                                                                                                                                                    | 0                 | .2457           | :33                 | .43               | 1.31          | :42           | .721         | .1149         |                    |  |  |
| 3-12                                                                                                                                                                    | .13               | .0474           | :52                 | .03               | 1.32          | :48           | .754         | .1887         |                    |  |  |
| 3-13                                                                                                                                                                    | 0                 | .0350           | 8:02                | .48               | 1.40          | 8:00          | .534         | .3187         |                    |  |  |
| 3-14                                                                                                                                                                    | 0                 | .0291           | :55                 | .06               | 1.45          | :05           | .414         | .3582         |                    |  |  |
| 3-15                                                                                                                                                                    | 0                 | .0256           | 9:05                | 3.00              | 1.95          | :10           | .349         | .3900         |                    |  |  |
| 3-16                                                                                                                                                                    | 0                 | .0230           | :13                 | 2.63              | 2.30          | :30           | .241         | .4872         |                    |  |  |
| 3-17                                                                                                                                                                    | .33               | .0204           | :18                 | 3.84              | 2.62          | 9:00          | .148         | .5829         |                    |  |  |
| 3-18                                                                                                                                                                    | .62               | .4790           | :22                 | .60               | 2.66          | :05           | .148         | .5953         |                    |  |  |
| 3-19                                                                                                                                                                    | 0                 | .0727           | :28                 | .20               | 2.68          | :10           | .168         | .6085         |                    |  |  |
| 3-20                                                                                                                                                                    | 0                 | .0316           | Total Rainfall      |                   |               | :15           | .258         | .6260         |                    |  |  |
| 3-21                                                                                                                                                                    | .04               | .0181           | R-1                 |                   |               | :21           | .489         | .6626         |                    |  |  |
| 3-22                                                                                                                                                                    | .26               | .0778           | R-2                 |                   |               | :26           | 1.02         | .7254         |                    |  |  |
| 3-23                                                                                                                                                                    | 0                 | .0256           | R-5a )              |                   |               | :30           | 1.54         | .8128         |                    |  |  |
| 3-24                                                                                                                                                                    | 0                 | .0181           | R-6 ) operation     |                   |               | :34           | 1.77         | .9239         |                    |  |  |
| 3-25                                                                                                                                                                    | 0                 | .0118           | Est. Watershed Ave. |                   |               | :36           | 1.73         | .9822         |                    |  |  |
| 3-26                                                                                                                                                                    | 0                 | .0072           |                     |                   |               | :42           | 1.40         | 1.1378        |                    |  |  |
| 3-27 to 30                                                                                                                                                              | 0                 | .0200e          |                     |                   |               | :48           | .992         | 1.2576        |                    |  |  |
| 3-31                                                                                                                                                                    | .25               | .0035e          |                     |                   |               | :54           | .746         | 1.3440        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 10:00         | .571         | 1.4100        |                    |  |  |
| Watershed Conditions: 10.4% of area was in small grain, 9.6% in corn, 24% in hay, 43.4% in pasture, 5.8% in ungrazed woods, 4.8% in grazed woods, and 2% in farmsteads. |                   |                 |                     |                   |               | :06           | .421         | 1.4593        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | :12           | .342         | 1.4970        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | :30           | .213         | 1.5785        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 11:00         | .120         | 1.6588        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 12:00         | .0646        | 1.7468        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 4-1-52        |              |               |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 1:00a         | .0448        | 1.8005        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 3:00          | .0296        | 1.8729        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 5:00          | .0119        | 1.9155        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 8:00          | .0074        | 1.9429        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 12:00         | .0049        | 1.9673        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 5:00p         | .0034        | 1.9883        |                    |  |  |
|                                                                                                                                                                         |                   |                 |                     |                   |               | 12:00         | .0027        | 2.0093        |                    |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 292.205 .  
e - Estimated

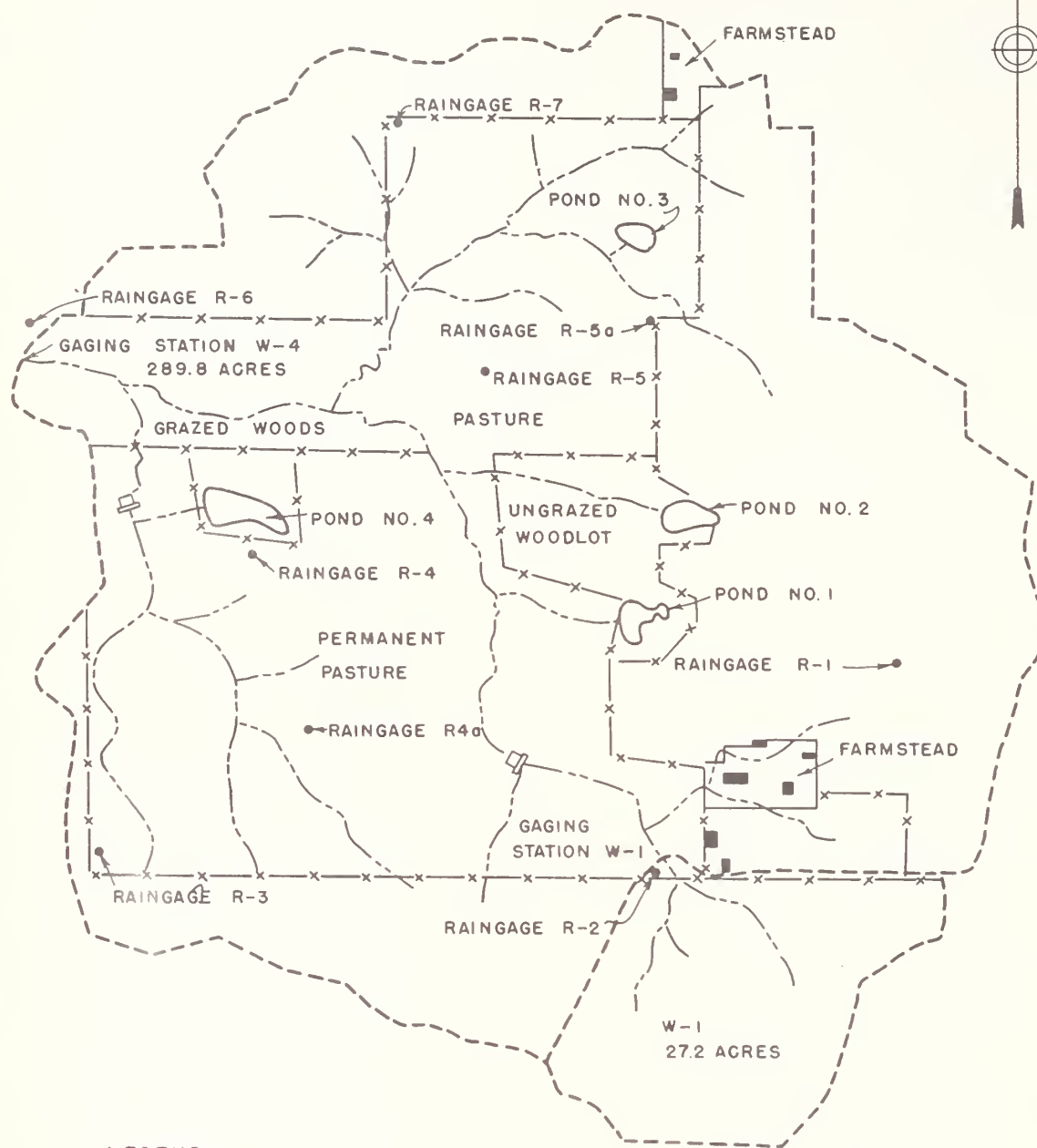
Notes: To convert runoff in in/hr to cfs, multiply by 292.205 .  
e - Estimated

| Edwardsville, Illinois                                                                                                                                              |                   |                 | Watershed W-4 (17.4) |                   |               | Area - 289.8 acres |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                               |                   |                 | Rainfall             |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| Event of July 2, 1952                                                                                                                                               |                   |                 |                      |                   |               |                    |              |               |
| 6-9-52                                                                                                                                                              | 4.06              | .6015           | 7-2-52               | Raingage          | R-6           | 7-2-52             |              |               |
| 6-10                                                                                                                                                                | .53               | .8737           | 12:40p               | 0                 | 0             | 12:56p             | 0            | 0             |
| 6-11                                                                                                                                                                | 0                 | .0089           | :48                  | 1.95              | .26           | 1:00               | .161         | .0047         |
| 6-20                                                                                                                                                                | .18               | 0               | :51                  | 7.80              | .65           | :04                | .566         | .0289         |
| 7-2                                                                                                                                                                 | .70               | 0               | :55                  | 7.65              | 1.16          | :08                | .871         | .0762         |
| Watershed Conditions: 10.4% of area was in small grain, 9.6% in corn, 24% in hay, 43.4% in pasture, 5.8% in ungrazed woods, 4.8% in grazed woods, 2% in farmsteads. |                   |                 | :58                  | 3.00              | 1.31          | :10                | 1.08         | .1087         |
|                                                                                                                                                                     |                   |                 | 1:03                 | 6.96              | 1.89          | :12                | 1.72         | .1552         |
|                                                                                                                                                                     |                   |                 | :10                  | 3.69              | 2.32          | :15                | 1.86         | .2444         |
|                                                                                                                                                                     |                   |                 | :25                  | .16               | 2.36          | :18                | 1.77         | .3351         |
|                                                                                                                                                                     |                   |                 | :50                  | .31               | 2.49          | :21                | 1.77         | .4235         |
|                                                                                                                                                                     |                   |                 | Total Rainfall       |                   |               |                    |              |               |
|                                                                                                                                                                     |                   |                 |                      | R-1               | 2.60          | :24                | 1.61         | .5078         |
|                                                                                                                                                                     |                   |                 |                      | R-2               | 2.23          | :27                | 1.30         | .5779         |
|                                                                                                                                                                     |                   |                 |                      | R-4a              | 2.38          | :30                | 1.04         | .6364         |
|                                                                                                                                                                     |                   |                 |                      | R-5a              | 2.81          | :36                | .741         | .7249         |
|                                                                                                                                                                     |                   |                 | Weighted Average     |                   |               | :42                | .558         | .7887         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | :48                | .416         | .8374         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 2:00               | .257         | .9033         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | :12                | .154         | .9435         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | :24                | .117         | .9706         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | :40                | .0816        | .9965         |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 3:00               | .0546        | 1.0190        |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 4:00               | .0254        | 1.0574        |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 5:00               | .0088        | 1.0730        |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 7:30               | .0035        | 1.0871        |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 12:00              | .0012        | 1.0968        |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 7-3-52             |              |               |
|                                                                                                                                                                     |                   |                 |                      |                   |               | 8:00p              | 0            | 1.1047        |
| Notes: To convert runoff in in/hr to cfs, multiply by 292.205 .                                                                                                     |                   |                 |                      |                   |               |                    |              |               |




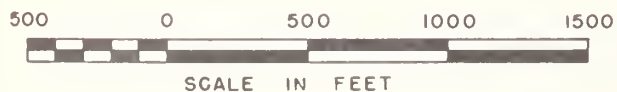


APPROXIMATE  
TRUE NORTH



# LEGEND

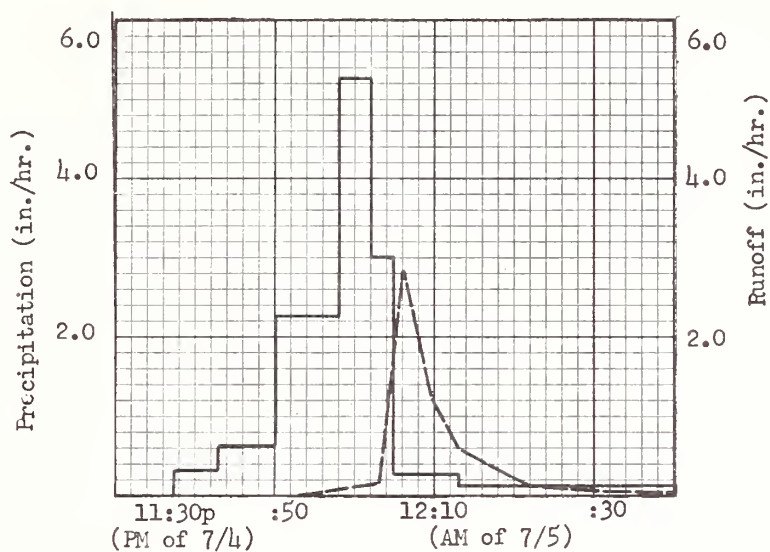
- WATERWAY
- - - WATERSHED BOUNDARY
- x - FENCE
-  CONCRETE DROP SPILLWAY



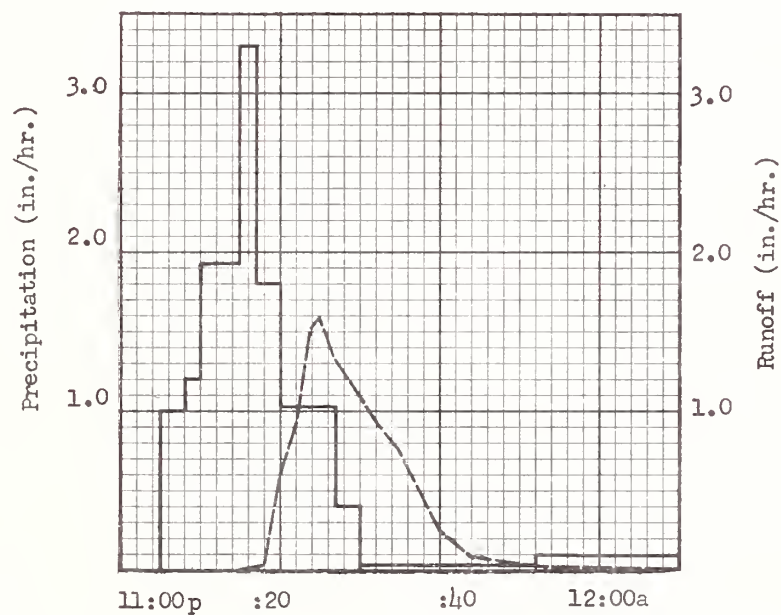
EDWARDSVILLE, ILLINOIS  
WATERSHED W 4

| Lafayette, Indiana                                                                                                                                     |                      |                    | Watershed 5 (19.4) |                      |                  | Area - 2.87 acres |                 |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                  |                      |                    | Rainfall           |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                                                   | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time   | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of July 5, 1943                                                                                                                                  |                      |                    |                    |                      |                  |                   |                 |                  |
| 6-5-43                                                                                                                                                 | 0.20                 | 0                  | 7-4-43             | Raingage             | R-2              | 7-4-43            |                 |                  |
| 6-6                                                                                                                                                    | .16                  | 0                  | 11:37p             | 0                    | 0                | 11:53p            | 0               | 0                |
| 6-10                                                                                                                                                   | .25                  | 0                  | :43                | .30                  | .03              | 7-5-43            |                 |                  |
| 6-13                                                                                                                                                   | 1.04                 | .01                | :50                | .60                  | .10              | 12:03a            | .182            | T                |
| 6-14                                                                                                                                                   | .05                  | 0                  | :58                | 2.25                 | .40              | :06               | 2.80            | .09              |
| 6-16                                                                                                                                                   | .05                  | 0                  | 7-5-43             |                      |                  | :09               | 1.31            | .19              |
| 6-20                                                                                                                                                   | .52                  | 0                  | 12:02a             | 5.25                 | .75              | :13               | .59             | .25              |
| 6-22                                                                                                                                                   | .95                  | .10                | :05                | 3.00                 | .90              | :22               | .114            | .30              |
| 6-25                                                                                                                                                   | .85                  | .08                | :13                | .22                  | .93              | :31               | .038            | .31              |
| 7-3                                                                                                                                                    | .08                  | 0                  | :46e               | .13                  | 1.00             | 1:45              | .003            | .32              |
| 7-4                                                                                                                                                    | .44                  | 0                  |                    |                      |                  | 4:08e             | 0               | .32              |
| Watershed Conditions: Area<br>in corn, about 30" high. Was<br>planted June 3. Last tillage<br>on July 4. Straight-row cul-<br>tivation, east and west. |                      |                    |                    |                      |                  |                   |                 |                  |
| Event of June 19, 1946                                                                                                                                 |                      |                    |                    |                      |                  |                   |                 |                  |
| 5-23-46                                                                                                                                                | .05                  | 0                  | 6-19-46            | Raingage             | R-2              | 6-19-46           |                 |                  |
| 5-24                                                                                                                                                   | .03                  | 0                  | 11:05p             | 0                    | 0                | 11:15p            | 0               | 0                |
| 5-25                                                                                                                                                   | .50                  | 0                  | :08                | 1.00                 | .05              | :18               | .002            | T                |
| 5-26                                                                                                                                                   | .13                  | 0                  | :10                | 1.20                 | .09              | :20               | .576            | .01              |
| 5-27                                                                                                                                                   | .08                  | 0                  | :15                | 1.92                 | .25              | :22               | .940            | .04              |
| 5-31                                                                                                                                                   | 1.46                 | T                  | :17                | 3.30                 | .36              | :24               | 1.52            | .08              |
| 6-11                                                                                                                                                   | .32                  | 0                  | :20                | 1.80                 | .45              | :25               | 1.57            | .10              |
| 6-12                                                                                                                                                   | .28                  | 0                  | :27                | 1.03                 | .57              | :27               | 1.34            | .15              |
| 6-13                                                                                                                                                   | .35                  | 0                  | :30                | .40                  | .59              | :32               | .931            | .24              |
| 6-15                                                                                                                                                   | .56                  | T                  | :52                | .03                  | .60              | :35               | .757            | .29              |
| 6-18                                                                                                                                                   | .93                  | .15                | 6-20-46            |                      |                  | :40               | .258            | .33              |
|                                                                                                                                                        |                      |                    | 12:15a             | .10                  | .64              | :44               | .082            | .34              |
|                                                                                                                                                        |                      |                    | :45e               | .02                  | .65              | :51               | .019            | .34              |
|                                                                                                                                                        |                      |                    |                    |                      |                  | 6-20-46           |                 |                  |
|                                                                                                                                                        |                      |                    |                    |                      |                  | 12:12a            | .005            | .35              |
|                                                                                                                                                        |                      |                    |                    |                      |                  | 3:12              | .003            | .36              |
|                                                                                                                                                        |                      |                    |                    |                      |                  | 4:30e             | 0               | .36              |
| Watershed Conditions: Area<br>in corn. Planted May 24 & 25.<br>Last tillage on June 16. East<br>and west straight-row culti-<br>vation.                |                      |                    |                    |                      |                  |                   |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 2.89.                                                                                            |                      |                    |                    |                      |                  |                   |                 |                  |

| Lafayette, Indiana                                                                                                                                                                       |                   |                 | Watershed 5 (19.4) |                   |               | Area - 2.87 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                    |                   |                 | Rainfall           |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                     | Rainfall (inches) | Runoff (inches) | Date and time      | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of June 7, 1947                                                                                                                                                                    |                   |                 |                    |                   |               |                   |              |               |
| 5-13-47                                                                                                                                                                                  | 0.43              | .01             | 6-7-47             | Raingage          | R-2           | 6-7-47            |              |               |
| 5-15                                                                                                                                                                                     | .10               | 0               | 9:52p              | 0                 | 0             | 10:06p            | 0            | 0             |
| 5-16                                                                                                                                                                                     | .15               | 0               | :55                | .40               | .02           | :17               | .043         | T             |
| 5-17                                                                                                                                                                                     | .10               | 0               | 10:00              | 1.32              | .13           | :25               | .236         | .02           |
| 5-19                                                                                                                                                                                     | .17               | 0               | :05                | 2.04              | .30           | :27               | .472         | .03           |
| 5-20                                                                                                                                                                                     | .01               | T               | :12                | .77               | .39           | :31               | .687         | .07           |
| 5-21                                                                                                                                                                                     | 1.47              | 0               | :17                | 2.52              | .60           | :34               | .837         | .11           |
| 5-24                                                                                                                                                                                     | .23               | 0               | :25                | 2.25              | .90           | :38               | .658         | .16           |
| 5-25                                                                                                                                                                                     | .10               | 0               | :32                | 1.29              | 1.05          | :44               | .336         | .21           |
| 5-26                                                                                                                                                                                     | .01               | 0               | :37                | .84               | 1.12          | :50               | .161         | .23           |
| 5-27                                                                                                                                                                                     | .25               | 0               | 11:00e             | .13               | 1.17          | :55               | .100         | .24           |
| 5-29                                                                                                                                                                                     | .51               | 0               |                    |                   |               | 11:17             | .032         | .26           |
| 6-1                                                                                                                                                                                      | .48               | 0               |                    |                   |               | :36               | .021         | .27           |
| 6-2                                                                                                                                                                                      | .79               | T               |                    |                   |               | 6-8-47            |              |               |
| 6-6                                                                                                                                                                                      | .80               | 0               |                    |                   |               | 12:33a            | .005         | .28           |
|                                                                                                                                                                                          |                   |                 |                    |                   |               | 1:05              | .003         | .28           |
| 6-7                                                                                                                                                                                      | .39               | T               |                    |                   |               | 5:05e             | 0            | .29           |
| Watershed Conditions: Area in fallow following corn. Had been plowed May 12 to 15 and disked once on May 22 in preparation for soybean planting. East and west straight-row cultivation. |                   |                 |                    |                   |               |                   |              |               |
| Event of June 24, 1950                                                                                                                                                                   |                   |                 |                    |                   |               |                   |              |               |
| 5-27-50                                                                                                                                                                                  | .22               | 0               | 6-24-50            | Raingage          | R-2           | 6-24-50           |              |               |
| 5-28                                                                                                                                                                                     | .75               | 0               | 8:55p              | 0                 | 0             | 8:57p             | 0            | 0             |
| 6-3                                                                                                                                                                                      | .25               | 0               | :58                | 8.40              | .42           | 9:00              | 3.99         | .12           |
| 6-4                                                                                                                                                                                      | .03               | 0               | 9:03               | 6.84              | .99           | :02               | 4.89         | .26           |
| 6-9                                                                                                                                                                                      | .33               | 0               | :10                | 1.37              | 1.15          | :04               | 4.48         | .42           |
| 6-10                                                                                                                                                                                     | .03               | 0               | :13                | 3.40              | 1.32          | :08               | 2.19         | .65           |
| 6-13                                                                                                                                                                                     | .54               | 0               | :18                | .24               | 1.34          | :11               | 1.53         | .74           |
| 6-15                                                                                                                                                                                     | .30               | 0               | :28                | .60               | 1.44          | :13               | 1.70         | .80           |
| 6-16                                                                                                                                                                                     | 2.13              | .65             | :46                | .13               | 1.48          | :17               | .964         | .88           |
| 6-18                                                                                                                                                                                     | .61               | .13             | 10:36e             | .04               | 1.52          | :20               | .444         | .92           |
| 6-19                                                                                                                                                                                     | .69               | .09             |                    |                   |               | :28               | .345         | .97           |
| 6-24                                                                                                                                                                                     | .30               | .01             |                    |                   |               | :35               | .173         | 1.00          |
|                                                                                                                                                                                          |                   |                 |                    |                   |               | :48               | .071         | 1.01          |
|                                                                                                                                                                                          |                   |                 |                    |                   |               | 10:24e            | 0            | 1.02          |
| Watershed Conditions: Area planted to corn on May 27th. Last cultivation on June 15th. Weedy. East and west straight-row cultivation.                                                    |                   |                 |                    |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 2.89.                                                                                                                              |                   |                 |                    |                   |               |                   |              |               |



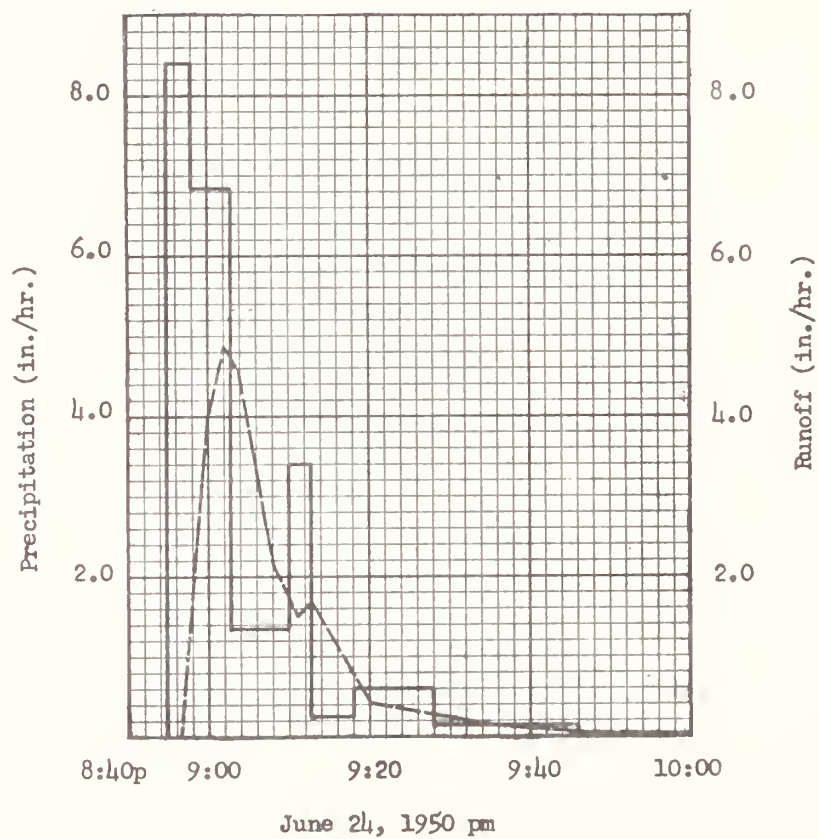
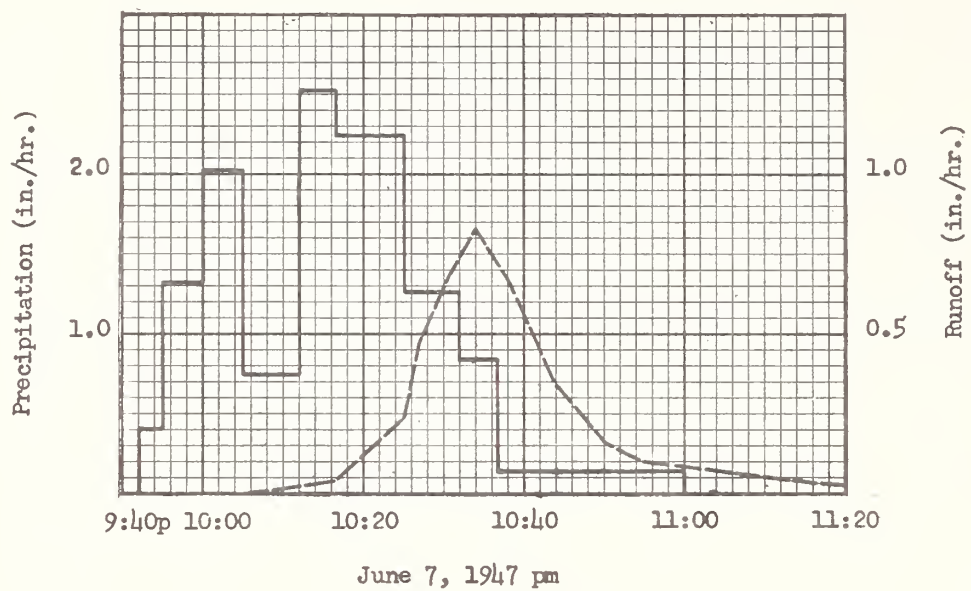
July 5, 1943



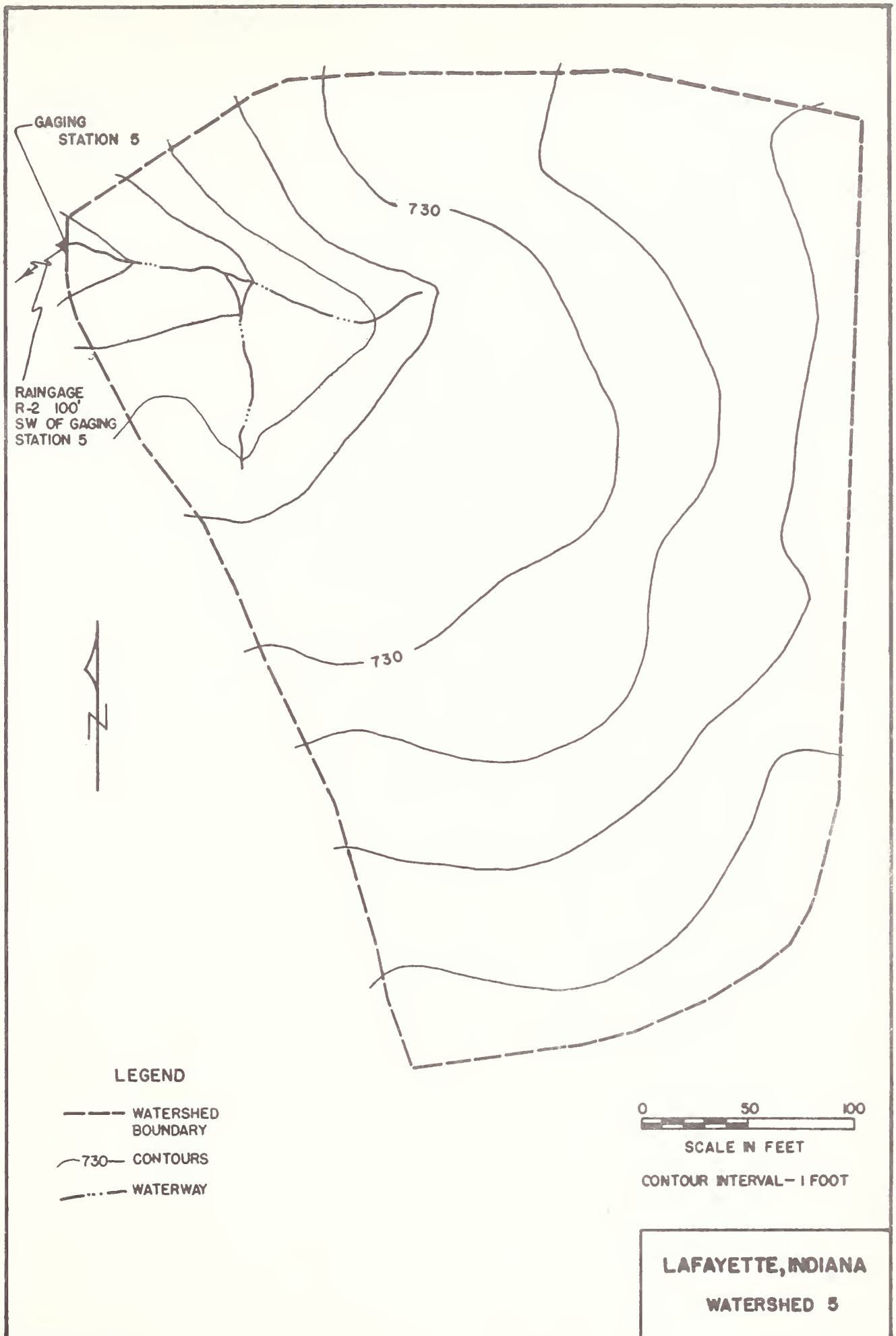
June 19, 1946 pm

LAFAYETTE, INDIANA (Purdue University) F-5





LAFAYETTE, INDIANA (Purdue University) F-5

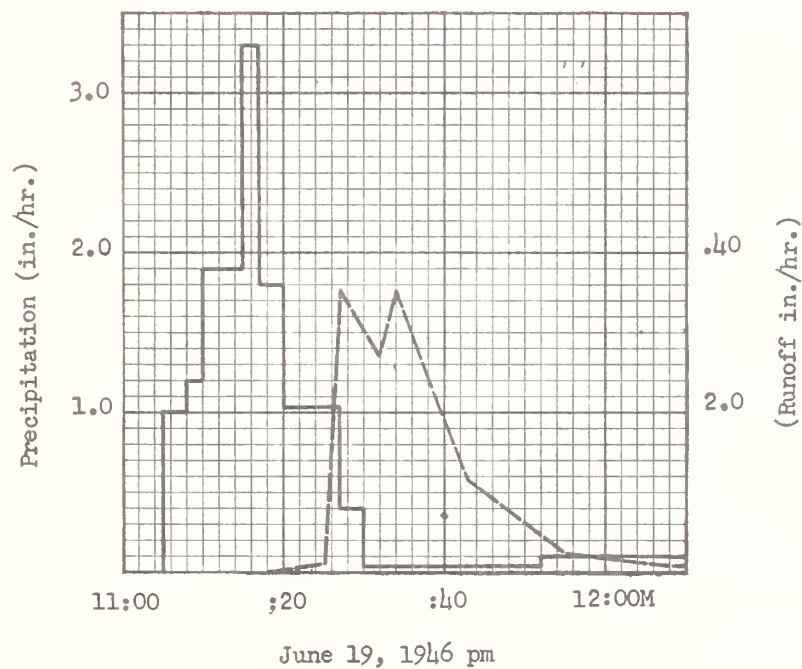
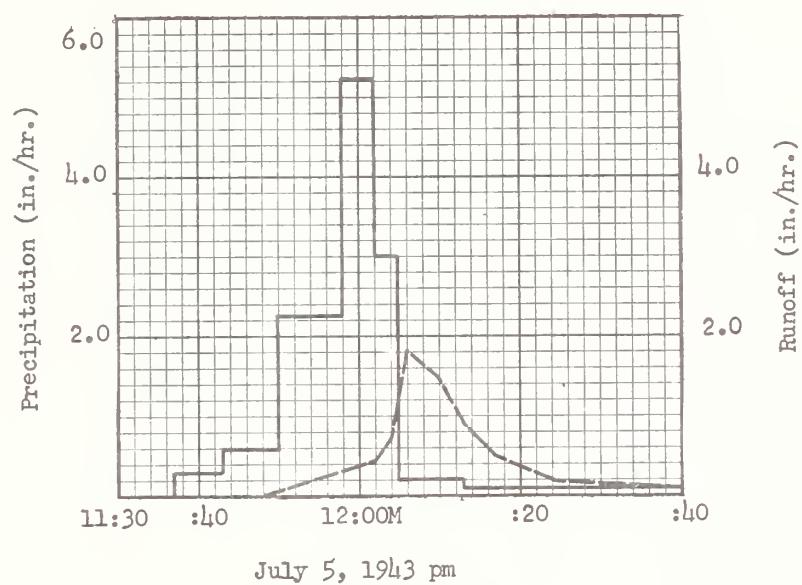




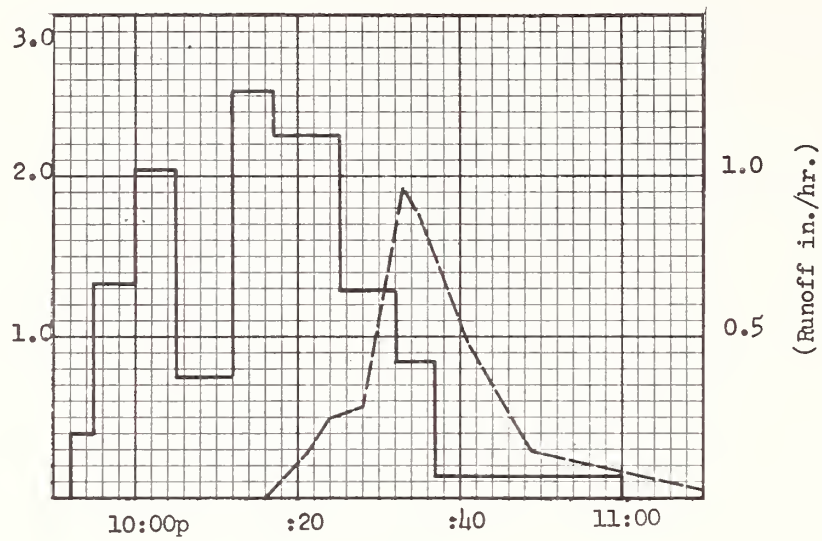
| Lafayette, Indiana                                                                                                                 |                   |                 | Watershed 6 (19.5) |                   |               | Area - 2.79 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                              |                   |                 | Rainfall           |                   |               | Runoff            |              |               |
| Date                                                                                                                               | Rainfall (inches) | Runoff (inches) | Date and time      | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of July 5, 1943                                                                                                              |                   |                 |                    |                   |               |                   |              |               |
| 6-5-43                                                                                                                             | 0.20              | 0               | 7-4-43             | Raingage          | R-2           | 7-4-43            |              |               |
| 6-6                                                                                                                                | .16               | 0               | 11:37p             | 0                 | 0             | 11:48p            | 0            | 0             |
| 6-10                                                                                                                               | .25               | 0               | :43                | .30               | .03           | 7-5-43            |              |               |
| 6-13                                                                                                                               | 1.04              | 0               | :50                | .60               | .10           | 12:02a            | .416         | T             |
| 6-14                                                                                                                               | .05               | 0               | :58                | 2.25              | .40           | :04               | .768         | .02           |
| 6-16                                                                                                                               | .05               | 0               | 7-5-43             |                   |               | :06               | 1.84         | .07           |
| 6-20                                                                                                                               | .52               | T               | 12:02a             | 5.25              | .75           | :08               | 1.69         | .13           |
| 6-22                                                                                                                               | .95               | .01             | :05                | 3.00              | .90           | :10               | 1.48         | .18           |
| 6-25                                                                                                                               | .85               | .02             | :13                | .22               | .93           | :13               | .957         | .24           |
| 7-3                                                                                                                                | .08               | 0               | :46e               | .13               | 1.00          | :17               | .510         | .29           |
| 7-4                                                                                                                                | .44               | 0               |                    |                   |               | :24               | .207         | .33           |
|                                                                                                                                    |                   |                 |                    |                   |               | :45               | .039         | .36           |
|                                                                                                                                    |                   |                 |                    |                   |               | 1:28              | .005         | .37           |
|                                                                                                                                    |                   |                 |                    |                   |               | 2:06              | .003         | .37           |
|                                                                                                                                    |                   |                 |                    |                   |               | 2:48e             | 0            | .37           |
| Watershed Conditions: Area in corn, about 30" high. Was planted June 3. Last tillage on July 4. Planted and tilled on the contour. |                   |                 |                    |                   |               |                   |              |               |
| Event of June 19, 1946                                                                                                             |                   |                 |                    |                   |               |                   |              |               |
| 5-23-46                                                                                                                            | .05               | 0               | 6-19-46            | Raingage          | R-2           | 6-19-46           |              |               |
| 5-24                                                                                                                               | .03               | 0               | 11:05p             | 0                 | 0             | 11:18p            | 0            | 0             |
| 5-25                                                                                                                               | .50               | 0               | :08                | 1.00              | .05           | :25               | .010         | T             |
| 5-26                                                                                                                               | .13               | 0               | :10                | 1.20              | .09           | :27               | .354         | .01           |
| 5-27                                                                                                                               | .08               | 0               | :15                | 1.92              | .25           | :32               | .269         | .04           |
| 5-31                                                                                                                               | 1.46              | .01             | :17                | 3.30              | .36           | :34               | .354         | .05           |
| 6-11                                                                                                                               | .32               | 0               | :20                | 1.80              | .45           | :43               | .118         | .08           |
| 6-12                                                                                                                               | .28               | 0               | :27                | 1.03              | .57           | :55               | .025         | .09           |
| 6-13                                                                                                                               | .35               | 0               | :30                | .40               | .59           | 6-20-46           |              |               |
| 6-15                                                                                                                               | .56               | 0               | :52                | .03               | .60           | 12:08a            | .012         | .09           |
| 6-18                                                                                                                               | .93               | 0               | 6-20-46            |                   |               | 1:51              | .002         | .10           |
|                                                                                                                                    |                   |                 | 12:15a             | .10               | .64           | 2:20e             | 0            | .10           |
|                                                                                                                                    |                   |                 | :45e               | .02               | .65           |                   |              |               |
| Watershed Conditions: Area in corn. Planted May 24 & 25. Last tillage on June 18. Tilled and planted on the contour.               |                   |                 |                    |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 2.81.                                                                        |                   |                 |                    |                   |               |                   |              |               |



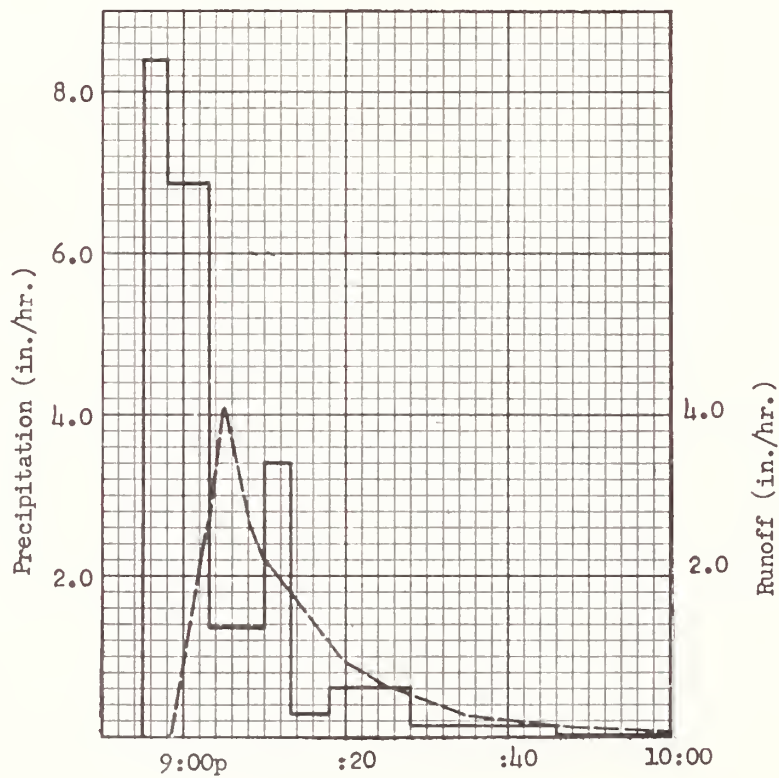
| Lafayette, Indiana                                                                                                                                                             |                      |                    | Watershed 6 (19.5) |                      |                  | Area - 2.79 acres |                 |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                          |                      |                    | Rainfall           |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time   | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 7, 1947                                                                                                                                                          |                      |                    |                    |                      |                  |                   |                 |                  |
| 5-13-47                                                                                                                                                                        | 0.43                 | 0                  | 6-7-47             | Raingage             | R-2              | 6-7-47            |                 |                  |
| 5-15                                                                                                                                                                           | .10                  | 0                  | 9:52p              | 0                    | 0                | 10:16p            | 0               | 0                |
| 5-16                                                                                                                                                                           | .15                  | 0                  | :55                | .40                  | .02              | :21               | .137            | T                |
| 5-17                                                                                                                                                                           | .10                  | 0                  | 10:00              | 1.32                 | .13              | :24               | .241            | .01              |
| 5-19                                                                                                                                                                           | .17                  | 0                  | :05                | 2.04                 | .30              | :28               | .283            | .03              |
| 5-20                                                                                                                                                                           | .01                  | 0                  | :12                | .77                  | .39              | :33               | .951            | .08              |
| 5-21                                                                                                                                                                           | 1.47                 | 0                  | :17                | 2.52                 | .60              | :35               | .872            | .11              |
| 5-24                                                                                                                                                                           | .23                  | 0                  | :25                | 2.25                 | .90              | :41               | .478            | .18              |
| 5-25                                                                                                                                                                           | .10                  | 0                  | :32                | 1.29                 | 1.05             | :49               | .150            | .22              |
| 5-26                                                                                                                                                                           | .01                  | 0                  | :37                | .84                  | 1.12             | 11:10             | .028            | .24              |
| 5-27                                                                                                                                                                           | .25                  | 0                  | 11:00e             | .13                  | 1.17             | 6-8-47            |                 |                  |
| 5-29                                                                                                                                                                           | .51                  | 0                  |                    |                      |                  | 12:24a            | .003            | .25              |
| 6-1                                                                                                                                                                            | .48                  | 0                  |                    |                      |                  | 1:20e             | 0               | .25              |
| 6-2                                                                                                                                                                            | .79                  | 0                  |                    |                      |                  |                   |                 |                  |
| 6-6                                                                                                                                                                            | .80                  | 0                  |                    |                      |                  |                   |                 |                  |
| 6-7                                                                                                                                                                            | .39                  | 0                  |                    |                      |                  |                   |                 |                  |
| Watershed Conditions: Area in fallow following corn. Had been plowed May 12 to 15 and disked once on May 22 in preparation for soybean planting. Plowed and disked on contour. |                      |                    |                    |                      |                  |                   |                 |                  |
| Event of June 24, 1950                                                                                                                                                         |                      |                    |                    |                      |                  |                   |                 |                  |
| 5-27-50                                                                                                                                                                        | .22                  | 0                  | 6-24-50            | Raingage             | R-2              | 6-24-50           |                 |                  |
| 5-28                                                                                                                                                                           | .75                  | 0                  | 8:55p              | 0                    | 0                | 8:59p             | 0               | 0                |
| 6-3                                                                                                                                                                            | .25                  | 0                  | :58                | 8.40                 | .42              | 9:01              | 1.51            | .02              |
| 6-4                                                                                                                                                                            | .03                  | 0                  | 9:03               | 6.84                 | .99              | :03               | 2.62            | .09              |
| 6-9                                                                                                                                                                            | .33                  | 0                  | :10                | 1.37                 | 1.15             | :05               | 4.12            | .21              |
| 6-10                                                                                                                                                                           | .03                  | 0                  | :13                | 3.40                 | 1.32             | :06               | 3.62            | .27              |
| 6-13                                                                                                                                                                           | .54                  | 0                  | :18                | .24                  | 1.34             | :08               | 2.69            | .37              |
| 6-15                                                                                                                                                                           | .30                  | 0                  | :28                | .60                  | 1.44             | :10               | 2.24            | .46              |
| 6-16                                                                                                                                                                           | 2.13                 | .33                | :46                | .13                  | 1.48             | :14               | 1.66            | .59              |
| 6-18                                                                                                                                                                           | .61                  | .03                | 10:36e             | .04                  | 1.52             | :20               | .921            | .71              |
| 6-19                                                                                                                                                                           | .69                  | .07                |                    |                      |                  | :24               | .663            | .76              |
| 6-24                                                                                                                                                                           | .30                  | 0                  |                    |                      |                  | :35               | .269            | .85              |
|                                                                                                                                                                                |                      |                    |                    |                      |                  | :48               | .130            | .88              |
|                                                                                                                                                                                |                      |                    |                    |                      |                  | 10:13             | .021            | .91              |
|                                                                                                                                                                                |                      |                    |                    |                      |                  | 11:39e            | 0               | .92              |
| Watershed Conditions: Area planted to corn on May 27th. Last cultivation on June 15th. Planted and tilled on contour.                                                          |                      |                    |                    |                      |                  |                   |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 2.81.                                                                                                                    |                      |                    |                    |                      |                  |                   |                 |                  |



LAFAYETTE, INDIANA (Purdue University) F-6

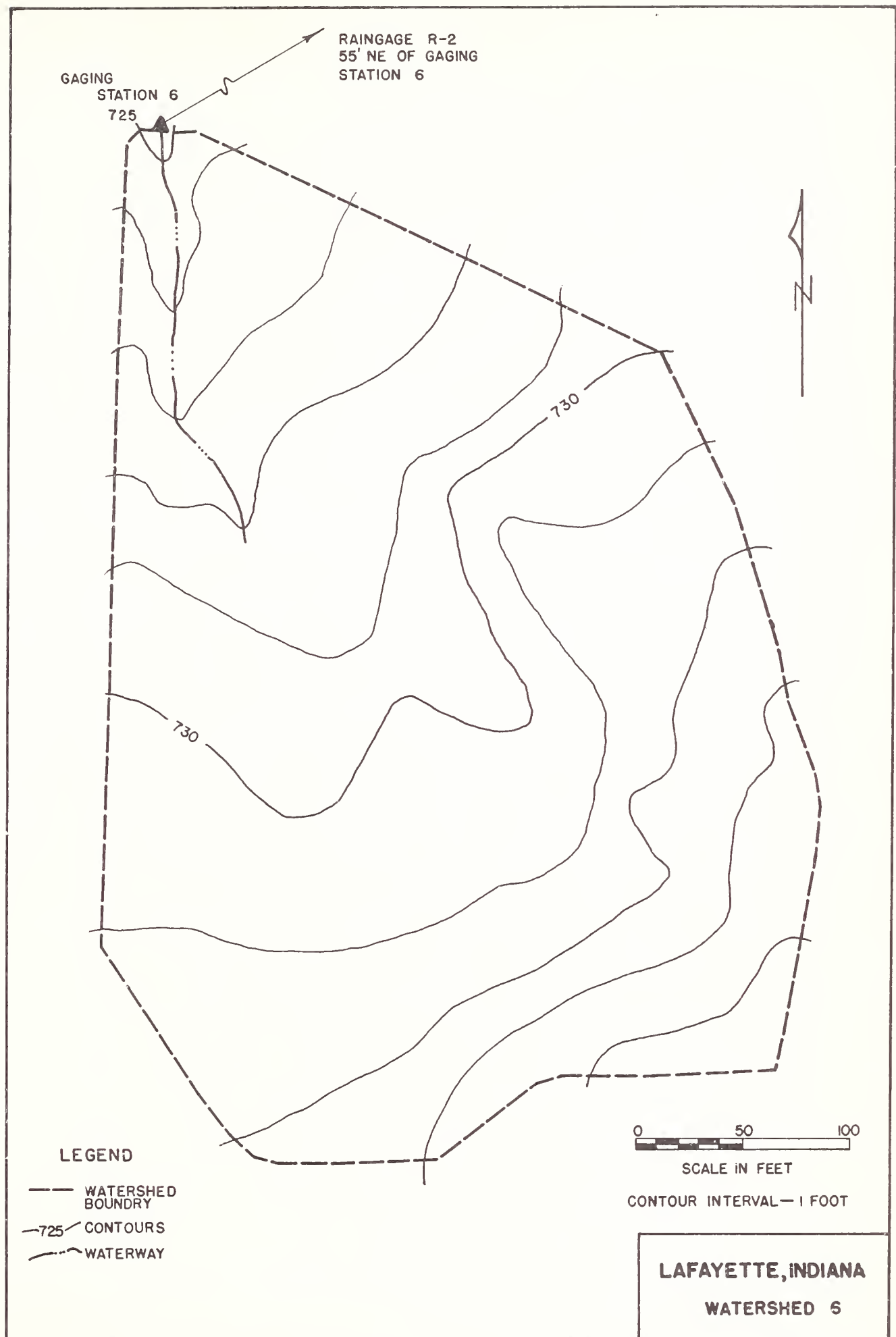


June 7, 1947pm



June 24, 1950 pm

LAFAYETTE, INDIANA (Purdue University) F-6







| Iowa City, Iowa       |                      |                    | Ralston Creek    |                      |                  | (21.1) Area - 1,926 Acres |                 |                  |
|-----------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 1, 1943 |                      |                    |                  |                      |                  |                           |                 |                  |
| 5-1-43                | 0                    | .0144              | 6-1-43           | Raingage             | #1               | 6-1-43                    |                 |                  |
| 5-2                   | 0                    | .0346              | 6:50p            | 0                    | 0                | 7:00p                     | .0009           | 0                |
| 5-3                   | 0                    | .0222              | 7:00             | .48                  | .08              | :30                       | .0141           | .0037            |
| 5-4                   | 0                    | .0210              | :15              | 3.28                 | .90              | :45                       | .0349           | .0098            |
| 5-5                   | .34                  | .0198              | :30              | .36                  | .99              | :50                       | .0536           | .0135            |
| 5-6                   | .25                  | .0494              | :40              | .96                  | 1.15             | 8:00                      | .1246           | .0283            |
| 5-7                   | .03                  | .0222              | :50              | 3.42                 | 1.72             | :05                       | .1622           | .0403            |
| 5-8                   | 0                    | .0222              |                  |                      |                  | :10                       | .2152           | .0560            |
| 5-9                   | .04                  | .0173              | 6-1-43           | Raingage             | #2               | :15                       | .2754           | .0764            |
| 5-10                  | .18                  | .0235              | 6:45p            | 0                    | 0                | :20                       | .3410           | .1021            |
| 5-11                  | 0                    | .0210              | :50              | .60                  | .05              | :25                       | .4120           | .1335            |
| 5-12                  | 0                    | .0148              | :55              | 1.80                 | .20              | :30                       | .4890           | .1710            |
| 5-13                  | 0                    | .0148              | 7:05             | 3.00                 | .70              | :45                       | .4635           | .2900            |
| 5-14                  | .04                  | .0185              | :20              | .40                  | .80              | 9:00                      | .4223           | .4007            |
| 5-15                  | 1.84                 | .2840              | :30              | 1.50                 | 1.05             | :15                       | .4100           | .5047            |
| 5-16                  | 0                    | .1235              | :40              | 5.10                 | 1.90             | :30                       | .3595           | .6009            |
| 5-17                  | .24                  | .0680              |                  |                      |                  | :45                       | .2884           | .6819            |
| 5-18                  | .36                  | .1730              | 6-1-43           | Raingage             | #3               | 10:00                     | .2290           | .7466            |
| 5-19                  | .38                  | .1000              | 6:50p            | 0                    | 0                | :15                       | .1590           | .7951            |
| 5-20                  | .16                  | .1482              | 7:00             | .42                  | .07              | :30                       | .0942           | .8268            |
| 5-21                  | 0                    | .0679              | :07              | 3.43                 | .47              | :45                       | .0577           | .8458            |
| 5-22                  | 0                    | .0494              | :15              | 3.75                 | .97              | 11:00                     | .0355           | .8575            |
| 5-23                  | 0                    | .0420              | :30              | .60                  | 1.12             | :15                       | .0267           | .8653            |
| 5-24                  | .33                  | .0593              | :40              | 1.50                 | 1.37             | :30                       | .0219           | .8714            |
| 5-25                  | 0                    | .0420              | :51              | 4.09                 | 2.12             | :45                       | .0193           | .8766            |
| 5-26                  | 0                    | .0346              | 6-1-43           | Raingage             | #4               | 12:00                     | .0171           | .8812            |
| 5-27                  | 0                    | .0309              | 6:45p            | 0                    | 0                | 6-2-43                    |                 |                  |
| 5-28                  | 0                    | .0247              | :53              | .68                  | .09              | 1:00a                     | .0126           | .8960            |
| 5-29                  | 0                    | .0210              | 7:08             | 3.64                 | 1.00             | 2:00                      | .0096           | .9071            |
| 5-30                  | .51                  | .0346              | :25              | .60                  | 1.17             | 4:00                      | .0080           | .9247            |
| 5-31                  | 0                    | .0235              | :35              | .84                  | 1.31             | 8:00                      | .0066           | .9539            |
| 6-1                   | .23                  | .0184              | :47              | 4.15                 | 2.14             | 12:00                     | .0058           | .9787            |
|                       |                      |                    | 6-1-43           | Raingage             | #5               | 6:00p                     | .0052           | 1.0117           |
|                       |                      |                    | 6:50p            | 0                    | 0                | 12:00                     | .0043           | 1.0399           |
|                       |                      |                    | 7:00             | .66                  | .11              | 12 noon                   | .0035           | 1.0867           |
|                       |                      |                    | :07              | 4.72                 | .66              | 12 mid                    | .0030           | 1.1263           |
|                       |                      |                    | :13              | 2.40                 | .90              |                           |                 |                  |
|                       |                      |                    | :30              | .57                  | 1.06             |                           |                 |                  |
|                       |                      |                    | :37              | 1.71                 | 1.26             |                           |                 |                  |
|                       |                      |                    | :45              | 3.38                 | 1.71             |                           |                 |                  |
|                       |                      |                    | :50              | 2.04                 | 1.88             |                           |                 |                  |
|                       |                      |                    | Weighted Average |                      |                  | 1.96                      |                 |                  |

Notes: To convert runoff in in/hr to cfs, multiply by 1942.04 .

Notes: To convert runoff in in/hr to cfs, multiply by 1942.04 .

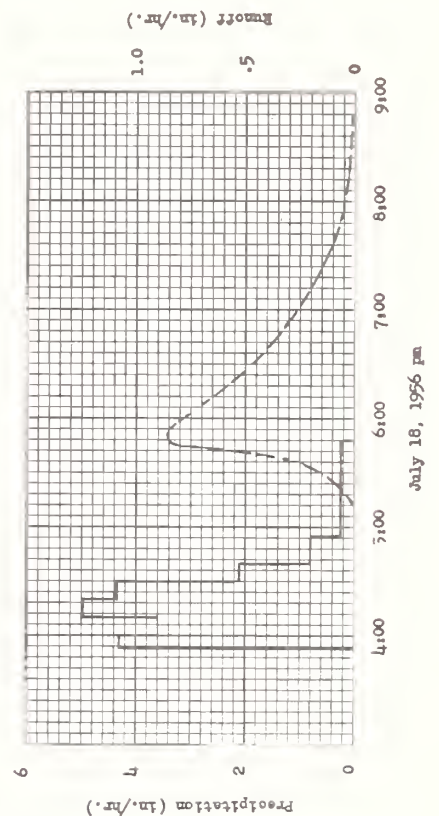
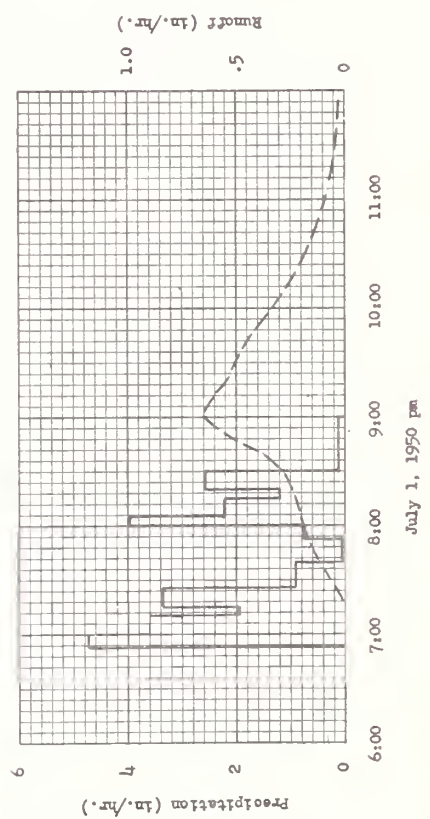
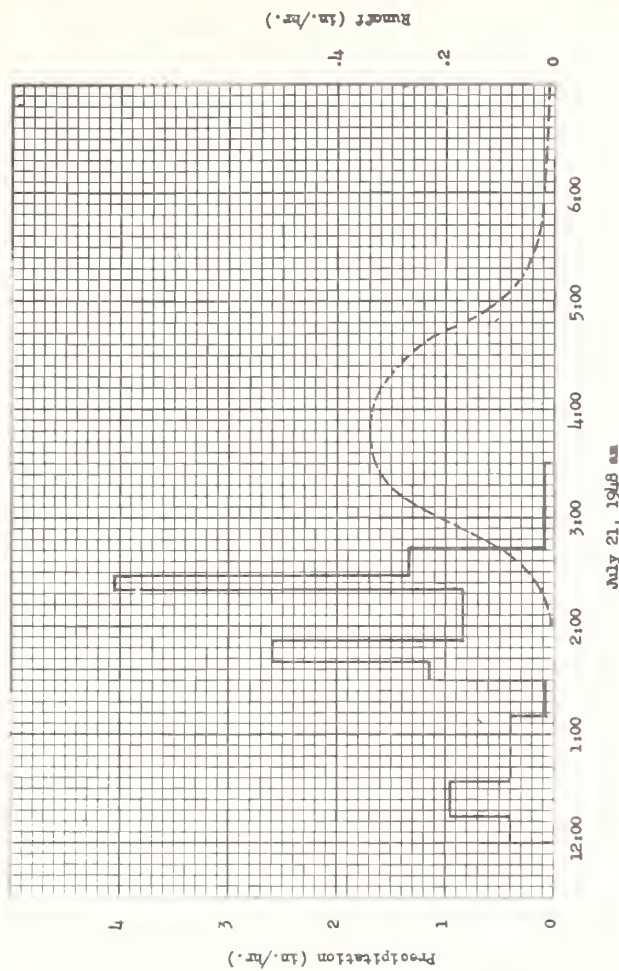
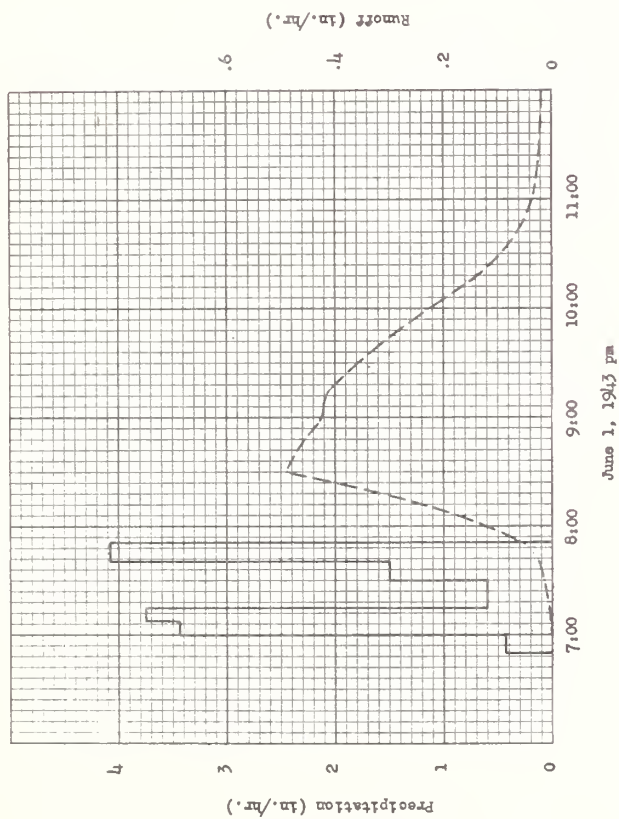
| Iowa City, Iowa                                                 |                      |                    | Ralston Creek    |                      |                  | (21.1)           |                 |                  | Area - 1,926 Acres |  |  |
|-----------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|--------------------|--|--|
| Antecedent conditions                                           |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                    |  |  |
| Date                                                            | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                    |  |  |
| Event of July 21, 1948                                          |                      |                    |                  |                      |                  |                  |                 |                  |                    |  |  |
| 6-21-48                                                         | 0                    | .0012              | 7-21-48          | Raingage             | #2               | 7-21-48          |                 |                  |                    |  |  |
| 6-22                                                            | .56                  | .0021              | 12:00a           | 0                    | 0                | 12:00a           | 0               | 0                |                    |  |  |
| 6-23                                                            | .12                  | .0067              | :15              | .40                  | .10              | 1:00             | .0002           | .0001            |                    |  |  |
| 6-24                                                            | 0                    | .0014              | :34              | .95                  | .40              | :30              | .0003           | .0002            |                    |  |  |
| 6-25                                                            | .01                  | .0009              | 1:10             | .40                  | .64              | 2:00             | .0043           | .0014            |                    |  |  |
| 6-26                                                            | .38                  | .0022              | :30              | .06                  | .66              | :10              | .0092           | .0025            |                    |  |  |
| 6-27                                                            | .21                  | .0035              | :40              | 1.14                 | .85              | :20              | .0217           | .0051            |                    |  |  |
| 6-28                                                            | .68                  | .0604              | :52              | 2.60                 | 1.37             | :30              | .0504           | .0111            |                    |  |  |
| 6-29                                                            | 0                    | .0068              | 2:20             | .84                  | 1.76             | :40              | .0804           | .0220            |                    |  |  |
| 6-30                                                            | 0                    | .0028              | :28              | 4.05                 | 2.30             | :50              | .1442           | .0407            |                    |  |  |
| 7-1                                                             | 0                    | .0020              | :43              | 1.32                 | 2.63             | 3:00             | .2120           | .0701            |                    |  |  |
| 7-2                                                             | 0                    | .0020              | 3:30             | .09                  | 2.70             | :10              | .2740           | .1106            |                    |  |  |
| 7-3                                                             | 0                    | .0020              |                  |                      |                  | :20              | .3110           | .1594            |                    |  |  |
| 7-4                                                             | .82                  | .0040              |                  |                      |                  | :30              | .3300           | .2128            |                    |  |  |
| 7-5                                                             | .01                  | .0099              |                  |                      |                  | :45              | .3395           | .2965            |                    |  |  |
| 7-6                                                             | 0                    | .0017              | Total Rainfall   |                      |                  | 4:00             | .3370           | .3810            |                    |  |  |
| 7-7                                                             | 0                    | .0012              |                  | #1                   | 2.64             | :15              | .3110           | .4620            |                    |  |  |
| 7-8                                                             | 0                    | .0006              |                  | #3                   | 2.52             | :30              | .2650           | .5340            |                    |  |  |
| 7-9                                                             | 0                    | .0002              |                  | #4                   | 2.60             | :40              | .2120           | .5737            |                    |  |  |
| 7-10                                                            | 0                    | .0001              |                  | #5                   | 2.65             | :50              | .1560           | .6044            |                    |  |  |
| 7-11                                                            | 0                    | .0001              | Weighted Average |                      |                  | 5:00             | .1015           | .6259            |                    |  |  |
| 7-12                                                            | .10                  | .0001              |                  |                      |                  | :10              | .0670           | .6399            |                    |  |  |
| 7-13                                                            | .02                  | .0001              |                  |                      |                  | :20              | .0469           | .6494            |                    |  |  |
| 7-14                                                            | .73                  | .0097              |                  |                      |                  | :30              | .0363           | .6563            |                    |  |  |
| 7-15                                                            | 0                    | .0011              |                  |                      |                  | 6:00             | .0193           | .6702            |                    |  |  |
| 7-16                                                            | 0                    | .0006              |                  |                      |                  | 7:00             | .0097           | .6847            |                    |  |  |
| 7-17                                                            | 0                    | .0001              |                  |                      |                  | 8:00             | .0068           | .6929            |                    |  |  |
| 7-18                                                            | 0                    | .0001              |                  |                      |                  | 10:00            | .0030           | .7027            |                    |  |  |
| 7-20                                                            | .09                  |                    |                  |                      |                  | 12:00            | .0018           | .7075            |                    |  |  |
|                                                                 |                      |                    |                  |                      |                  | 3:00p            | .0011           | .7120            |                    |  |  |
|                                                                 |                      |                    |                  |                      |                  | 6:00             | .0008           | .7150            |                    |  |  |
|                                                                 |                      |                    |                  |                      |                  | 9:00             | .0006           | .7171            |                    |  |  |
|                                                                 |                      |                    |                  |                      |                  | 12:00            | .0006           | .7189            |                    |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 1942.04 . |                      |                    |                  |                      |                  |                  |                 |                  |                    |  |  |

| Iowa City, Iowa       |                      |                    | Ralston Creek    |                      |                  | (21.1) Area - 1,926 Acres |                 |                  |
|-----------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of July 1, 1950 |                      |                    |                  |                      |                  |                           |                 |                  |
| 6-1-50                | .05                  | .0062              | 7-1-50           | Raingage             | #3               | 7-1-50                    |                 |                  |
| 6-2                   | .47                  | .0068              | 6:56p            | 0                    | 0                | 7:00p                     | 0               | 0                |
| 6-3                   | 0                    | .0078              | 7:01             | 4.56                 | .38              | :10                       | .0030           | .0003            |
| 6-4                   | 0                    | .0053              | :15              | 1.93                 | .83              | :20                       | .0183           | .0021            |
| 6-5                   | 0                    | .0032              | :30              | 1.80                 | 1.28             | :30                       | .0674           | .0092            |
| 6-6                   | 0                    | .0026              | :40              | 1.44                 | 1.52             | :40                       | .1185           | .0247            |
| 6-7                   | 0                    | .0022              | :50              | .06                  | 1.53             | :50                       | .1575           | .0477            |
| 6-8                   | 0                    | .0020              | 8:00             | .48                  | 1.61             | 8:00                      | .1865           | .0764            |
| 6-9                   | .08                  | .0020              | :08              | 2.78                 | 1.98             | :10                       | .2140           | .1098            |
| 6-10                  | 0                    | .0015              | :20              | 2.25                 | 2.43             | :20                       | .2447           | .1480            |
| 6-11                  | 0                    | .0011              | :33              | 1.20                 | 2.69             | :30                       | .2820           | .1919            |
| 6-12                  | .67                  | .0107              | 10:25            | .02                  | 2.73             | :35                       | .3235           | .2176            |
| 6-13                  | .80                  | .0568              | :30              | .60                  | 2.78             | :40                       | .3735           | .2466            |
| 6-14                  | .88                  | .1359              |                  |                      |                  | :45                       | .4660           | .2816            |
| 6-15                  | .01                  | .0395              |                  |                      |                  | :50                       | .5460           | .3238            |
| 6-16                  | 0                    | .0109              | 7-1-50           | Raingage             | #5               | :55                       | .6100           | .3720            |
| 6-17                  | 0                    | .0068              | 6:53p            | 0                    | 0                | 9:00                      | .6490           | .4244            |
| 6-18                  | 1.87                 | .3460              | 7:00             | 4.72                 | .55              | :10                       | .6080           | .5291            |
| 6-19                  | 0                    | .0617              | :10              | 3.60                 | 1.15             | :20                       | .5420           | .6249            |
| 6-20                  | 0                    | .0299              | :15              | 1.92                 | 1.31             | :30                       | .5045           | .7121            |
| 6-21                  | 0                    | .0196              | :25              | 3.36                 | 1.87             | :45                       | .4300           | .8289            |
| 6-22                  | 0                    | .0144              | :40              | .92                  | 2.10             | 10:00                     | .3370           | .9248            |
| 6-23                  | 0                    | .0114              | :53              | .05                  | 2.11             | :15                       | .2472           | .9978            |
| 6-24                  | .66                  | .0346              | 8:00             | .77                  | 2.20             | :30                       | .1803           | 1.0513           |
| 6-25                  | 0                    | .0136              | :05              | 3.96                 | 2.53             | :45                       | .1262           | 1.0896           |
| 6-26                  | 0                    | .0085              | :15              | 2.22                 | 2.90             | 11:00                     | .0854           | 1.1161           |
| 6-27                  | 0                    | .0068              | :20              | 1.20                 | 3.00             | :15                       | .0608           | 1.1344           |
| 6-28                  | 0                    | .0062              | :30              | 2.58                 | 3.43             | :30                       | .0442           | 1.1475           |
| 6-29                  | 0                    | .0051              | 9:00             | .12                  | 3.49             | 12:00                     | .0265           | 1.1651           |
| 6-30                  | 0                    | .0040              | 10:20            | .02                  | 3.51             | 7-2-50                    |                 |                  |
| 7-1-50                | 0                    | .0024              | :25              | 1.08                 | 3.60             | 1:00                      | .0165           | 1.1866           |
|                       |                      |                    |                  |                      |                  | 2:00                      | .0097           | 1.1997           |
|                       |                      |                    |                  |                      |                  | 3:00                      | .0082           | 1.2087           |
|                       |                      |                    |                  |                      |                  | 6:00                      | .0062           | 1.2303           |
|                       |                      |                    |                  |                      |                  | 9:00                      | .0046           | 1.2465           |
|                       |                      |                    |                  | Total Rainfall       |                  | 12:00                     | .0036           | 1.2588           |
|                       |                      |                    |                  | #1                   | 3.40             | 6:00p                     | .0024           | 1.2768           |
|                       |                      |                    |                  | #2                   | 2.96             | 12:00                     | .0018           | 1.2894           |
|                       |                      |                    |                  | #4                   | 3.58             |                           |                 |                  |
|                       |                      |                    |                  | Weighted Average     | 3.23             |                           |                 |                  |

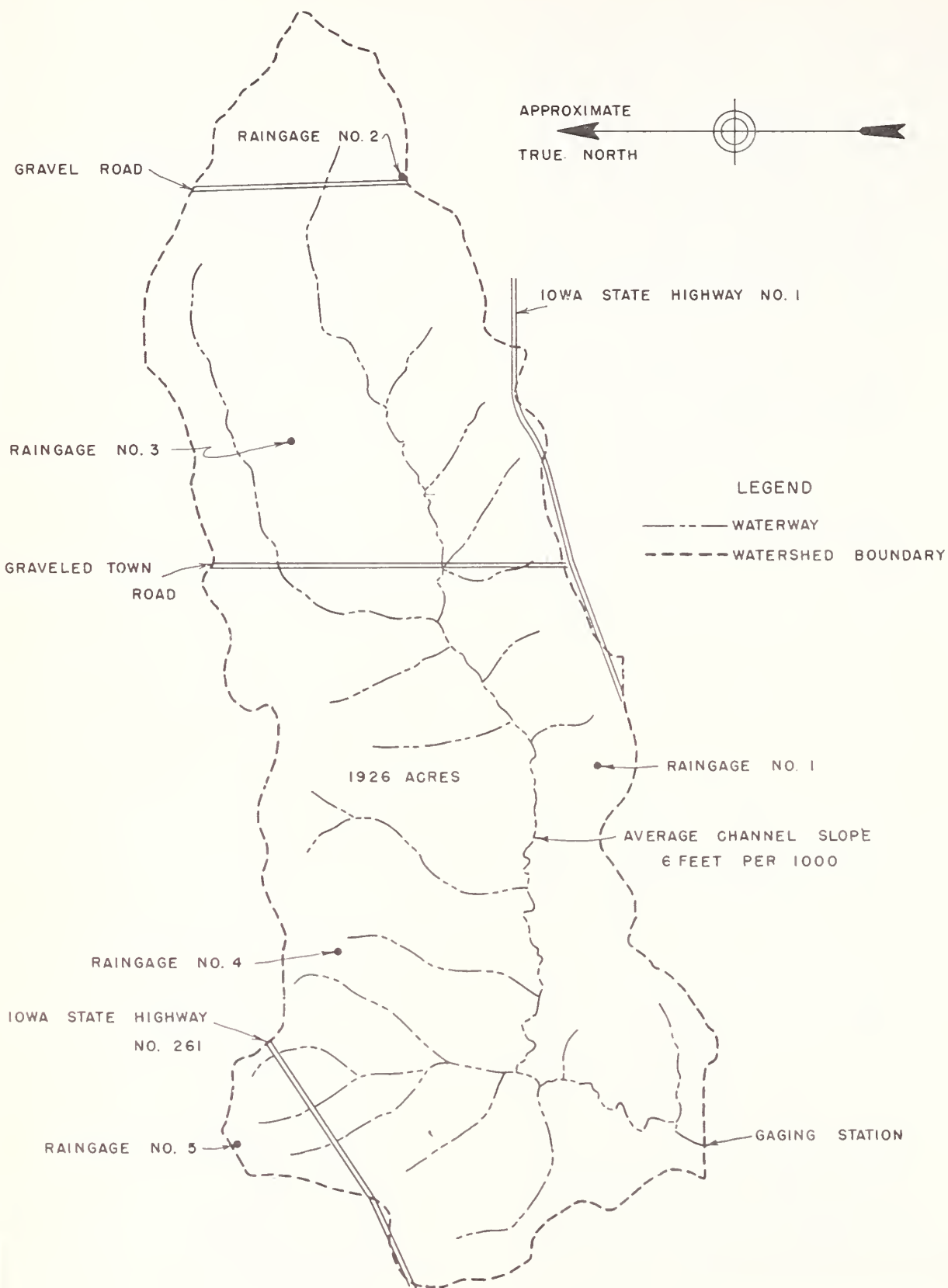
Notes: To convert runoff in in/hr to cfs, multiply by 1942.04.



Notes: To convert runoff in in/hr to cfs, multiply by 1942.04.



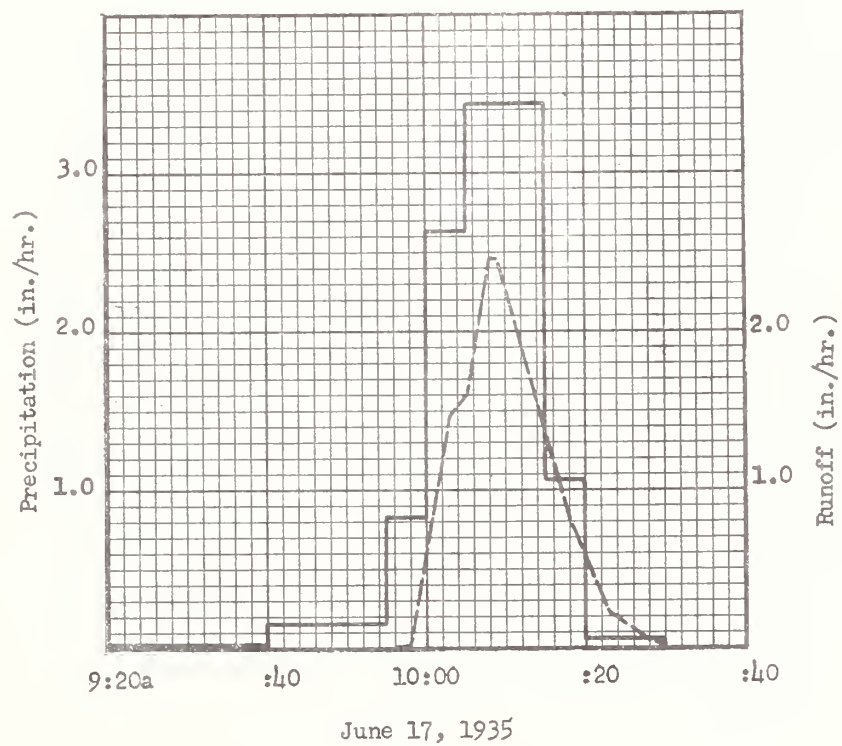
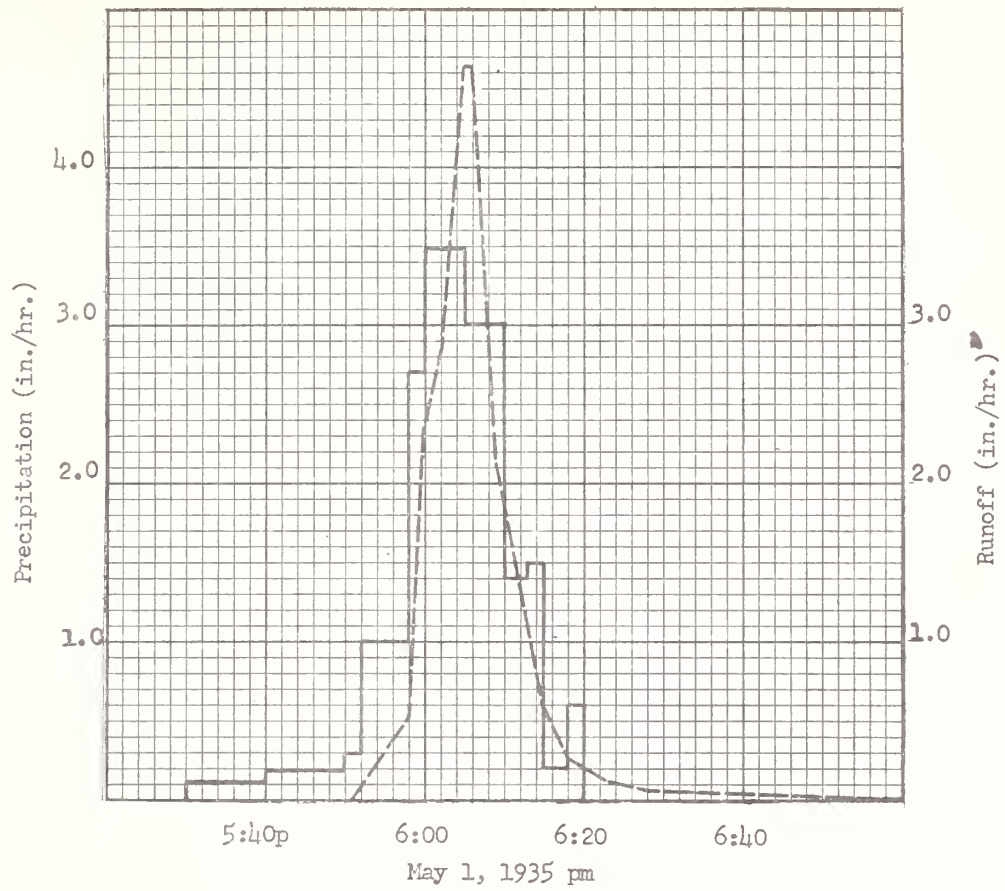
IOWA CITY, IOWA RALSTON CREEK



| Bethany, Missouri                                                                                                                                                                                                                                                                                 |                      |                    | Watershed D-3 (24.6) |                      |                  | Area: 4.85 ac. prior to 5/11/34<br>4.18 ac. thereafter. |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|---------------------------------------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                             |                      |                    | Rainfall             |                      |                  | Runoff                                                  |                 |                  |
| Date                                                                                                                                                                                                                                                                                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time                                        | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 21, 1933                                                                                                                                                                                                                                                                             |                      |                    |                      |                      |                  |                                                         |                 |                  |
| 4-29-33                                                                                                                                                                                                                                                                                           | 0.43                 | 0                  | 5-21-33              | Raingage             | R-2              | 5-21-33                                                 |                 |                  |
| 5-5                                                                                                                                                                                                                                                                                               | .79                  | 0                  | 9:11p                | 0                    | 0                | 9:19p                                                   | 0               | 0                |
| 5-10                                                                                                                                                                                                                                                                                              | .11                  | 0                  | :13                  | .30                  | .01              | :24                                                     | .033            | T                |
| 5-11                                                                                                                                                                                                                                                                                              | .28                  | 0                  | :16                  | .60                  | .04              | :27                                                     | .523            | .01              |
| 5-12                                                                                                                                                                                                                                                                                              | .32                  | 0                  | :18                  | 2.10                 | .11              | :29                                                     | 1.17            | .04              |
| 5-17                                                                                                                                                                                                                                                                                              | .02                  | 0                  | :20                  | .90                  | .14              | :32                                                     | 2.95            | .15              |
| 5-18                                                                                                                                                                                                                                                                                              | .10                  | 0                  | :22                  | 3.30                 | .25              | :33                                                     | 2.77            | .19              |
| 5-20                                                                                                                                                                                                                                                                                              | .64                  | .09                | :24                  | 5.10                 | .42              | :35                                                     | 1.07            | .26              |
| 5-21                                                                                                                                                                                                                                                                                              | .99                  | .17                | :26                  | 2.10                 | .49              | :39                                                     | .554            | .31              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :29                  | 1.60                 | .57              | :43                                                     | .266            | .34              |
| Watershed Conditions: Watershed<br>planted in corn on May 9-10. The<br>corn was 2" high at the time of<br>the storm and the soil was loose.<br>Cultivation was parallel to the<br>field boundaries without regard<br>to the direction of slope.                                                   |                      |                    | :36e                 | .26                  | .60              | :50                                                     | .107            | .36              |
|                                                                                                                                                                                                                                                                                                   |                      |                    |                      |                      |                  | 10:00e                                                  | 0               | .37              |
| Event of October 19, 1934                                                                                                                                                                                                                                                                         |                      |                    |                      |                      |                  |                                                         |                 |                  |
| 9-19-34                                                                                                                                                                                                                                                                                           | 0.06                 | 0                  | 10-19-34             | Raingage             | R-2              | 10-19-34                                                |                 |                  |
| 9-20                                                                                                                                                                                                                                                                                              | .31                  | 0                  | 5:45a                | 0                    | 0                | 7:17a                                                   | 0               | 0                |
| 9-21                                                                                                                                                                                                                                                                                              | .34                  | .01                | 6:15                 | .02                  | .01              | :22                                                     | .051            | T                |
| 9-25                                                                                                                                                                                                                                                                                              | .34                  | .03                | :45                  | .06                  | .04              | :26                                                     | .075            | .01              |
| 9-26                                                                                                                                                                                                                                                                                              | .79                  | .22                | 7:00                 | .12                  | .07              | :29                                                     | .075            | .01              |
| 9-28                                                                                                                                                                                                                                                                                              | .60                  | .15                | :05                  | .24                  | .09              | :35                                                     | .840            | .06              |
| 10-18                                                                                                                                                                                                                                                                                             | .25                  | 0                  | :11                  | .40                  | .13              | :37                                                     | 1.55            | .10              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :16                  | .60                  | .18              | :41                                                     | 2.03            | .22              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :20                  | .75                  | .23              | :44                                                     | 1.77            | .31              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :28                  | .45                  | .29              | :49                                                     | .972            | .42              |
| Watershed Conditions: Watershed<br>planted in corn. The corn was<br>not harvested; almost complete<br>failure due to drought and chinch<br>bugs. Some volunteer grass appear-<br>ing in corn. Cultivation was<br>parallel to the field boundaries<br>without regard to the direction<br>of slope. |                      |                    | :31                  | 3.20                 | .45              | :52                                                     | .104            | .45              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :34                  | 2.00                 | .55              | :54                                                     | .066            | .46              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :38                  | 3.75                 | .80              | :57                                                     | .104            | .46              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :41                  | 3.40                 | .97              | 8:03                                                    | .042            | .46              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :45                  | 2.25                 | 1.12             | 8:29e                                                   | 0               | .47              |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :49                  | 1.20                 | 1.20             |                                                         |                 |                  |
|                                                                                                                                                                                                                                                                                                   |                      |                    | :53e                 | .30                  | 1.22             |                                                         |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 4.89 for event of 5-21-33.<br>To convert runoff in in/hr to cfs, multiply by 4.52 for event of 10-19-34.                                                                                                                                    |                      |                    |                      |                      |                  |                                                         |                 |                  |

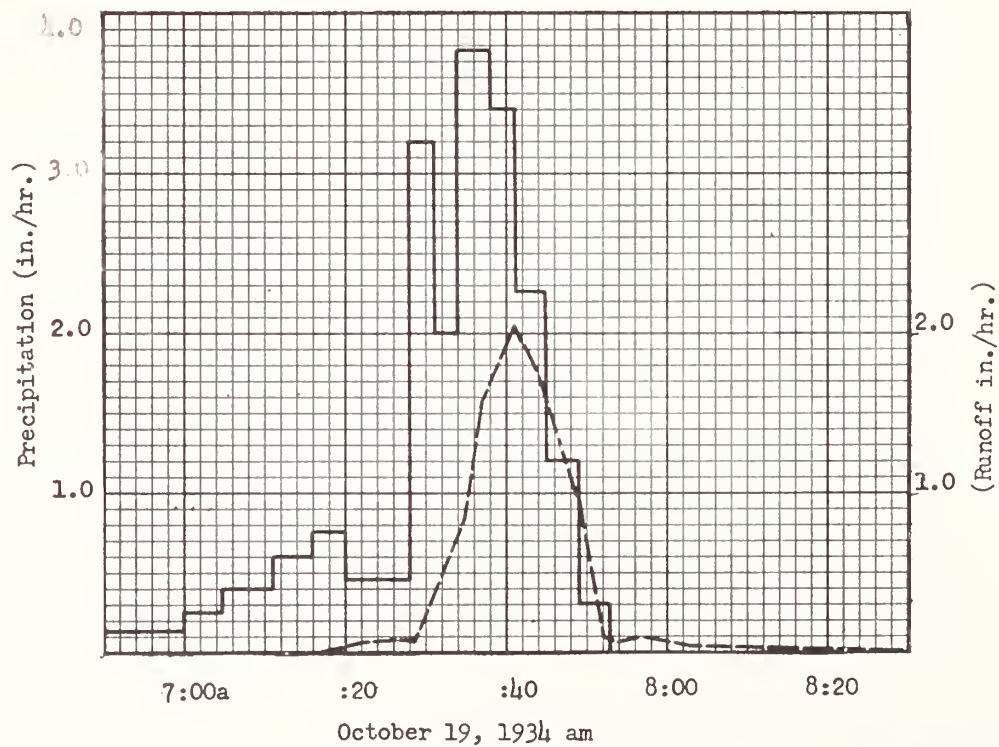
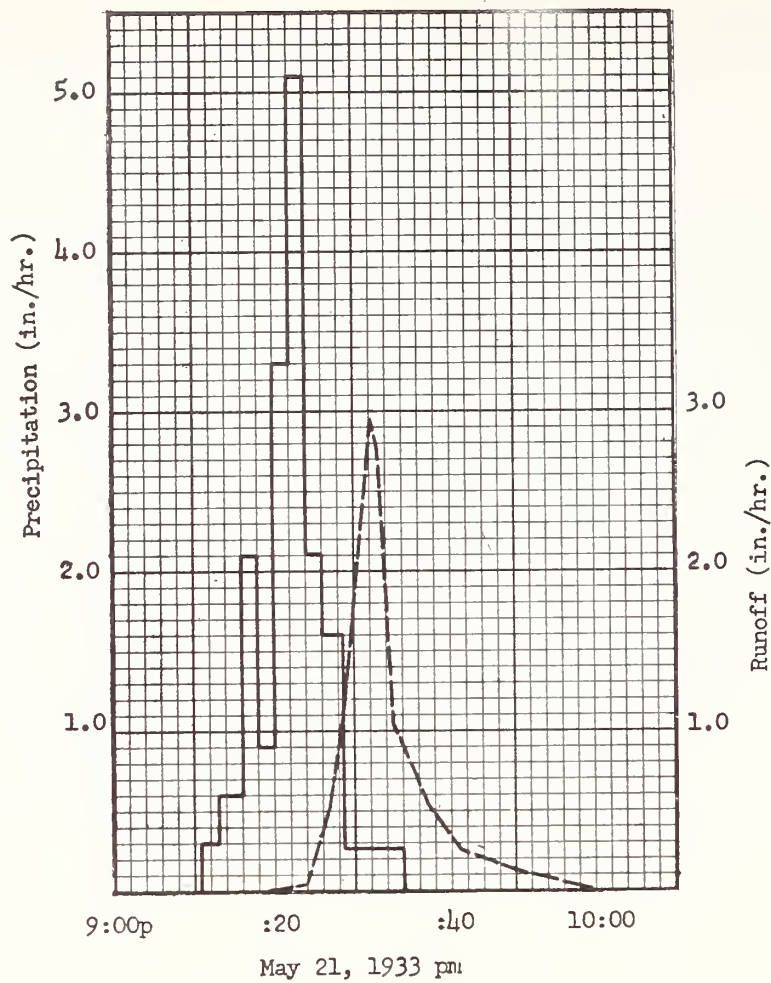


| Bethary, Missouri                                                                                                                                                                                                                                                                                                          |                      |                    | Watershed D-3 (24.6) |                      |                  | Area: 4.85 ac. prior to 5/11/34<br>4.48 ac. thereafter. |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|---------------------------------------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                      |                      |                    | Rainfall             |                      |                  | Runoff                                                  |                 |                  |
| Date                                                                                                                                                                                                                                                                                                                       | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time                                        | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 1, 1935                                                                                                                                                                                                                                                                                                       |                      |                    |                      |                      |                  |                                                         |                 |                  |
| 4-7-35                                                                                                                                                                                                                                                                                                                     | 0.50                 | 0.04               | 5-1-35               | Raingage             | R-2              | 5-1-35                                                  |                 |                  |
| 4-9                                                                                                                                                                                                                                                                                                                        | .03                  | 0                  | 5:30p                | 0                    | 0                | 5:51p                                                   | 0               | 0                |
| 4-10                                                                                                                                                                                                                                                                                                                       | .16                  | 0                  | :40                  | .12                  | .02              | :58                                                     | .530            | .03              |
| 4-11                                                                                                                                                                                                                                                                                                                       | .02                  | 0                  | :50                  | .18                  | .05              | 6:00                                                    | 2.34            | .07              |
| 4-17                                                                                                                                                                                                                                                                                                                       | 1.01                 | .06                | :52                  | .30                  | .06              | :02                                                     | 2.87            | .16              |
| 4-24                                                                                                                                                                                                                                                                                                                       | .13                  | 0                  | :58                  | 1.00                 | .16              | :05                                                     | 4.62            | .34              |
| 4-25                                                                                                                                                                                                                                                                                                                       | .41                  | .05                | 6:00                 | 2.70                 | .25              | :06                                                     | 4.62            | .41              |
| 4-28                                                                                                                                                                                                                                                                                                                       | .46                  | .05                | :05                  | 3.48                 | .54              | :09                                                     | 2.11            | .59              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    | :10                  | 3.00                 | .79              | :15                                                     | .603            | .72              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    | :13                  | 1.40                 | .36              | :18                                                     | .274            | .74              |
| Watershed Conditions: Soil preparation by disking and then oats, timothy and clover was drilled in on March 29. Thin stand of oats 2½" high on May 1. Cultivation was parallel to the field boundaries without regard to the direction of the slope.                                                                       |                      |                    | :15                  | 1.50                 | .91              | :23                                                     | .124            | .76              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    | :18                  | .20                  | .92              | :28                                                     | .066            | .76              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    | :20e                 | .60                  | .94              | :58                                                     | .004            | .78              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    |                      |                      |                  | 8:58e                                                   | 0               | .79              |
|                                                                                                                                                                                                                                                                                                                            |                      |                    |                      |                      |                  |                                                         |                 |                  |
| Event of June 17, 1935                                                                                                                                                                                                                                                                                                     |                      |                    |                      |                      |                  |                                                         |                 |                  |
| 5-18-35                                                                                                                                                                                                                                                                                                                    | 0.08                 | 0                  | 6-17-35              | Raingage             | R-2              | 6-17-35                                                 |                 |                  |
| 5-19                                                                                                                                                                                                                                                                                                                       | 1.66                 | 1.17               | 9:00a                | 0                    | 0                | 9:56a                                                   | 0               | 0                |
| 5-21                                                                                                                                                                                                                                                                                                                       | .01                  | 0                  | :40                  | .01                  | .01              | :58                                                     | .017            | T                |
| 5-22                                                                                                                                                                                                                                                                                                                       | .01                  | 0                  | :55                  | .16                  | .05              | 10:03                                                   | 1.45            | .06              |
| 5-23                                                                                                                                                                                                                                                                                                                       | .04                  | 0                  | 10:00                | .84                  | .12              | :05                                                     | 1.61            | .11              |
| 5-25                                                                                                                                                                                                                                                                                                                       | .20                  | .05                | :05                  | 2.64                 | .34              | 10:08                                                   | 2.48            | .21              |
| 5-27                                                                                                                                                                                                                                                                                                                       | .85                  | .47                | :15                  | 3.42                 | .91              | :09                                                     | 2.48            | .26              |
| 5-28                                                                                                                                                                                                                                                                                                                       | .14                  | .13                | :20                  | 1.08                 | 1.00             | :18                                                     | .800            | .50              |
| 5-29                                                                                                                                                                                                                                                                                                                       | .76                  | .53                | :30 1/               | .06                  | 1.01             | :23                                                     | .219            | .55              |
| 5-30                                                                                                                                                                                                                                                                                                                       | .04                  | .01                |                      |                      |                  | :28                                                     | .058            | .56              |
| 5-31                                                                                                                                                                                                                                                                                                                       | 1.30                 | .81                |                      |                      |                  | :30 1/                                                  | .044 2/         | .56              |
| 6-1-35                                                                                                                                                                                                                                                                                                                     | 1.64                 | 1.36               |                      |                      |                  |                                                         |                 |                  |
| 6-3                                                                                                                                                                                                                                                                                                                        | .08                  | 0                  |                      |                      |                  |                                                         |                 |                  |
| 6-5                                                                                                                                                                                                                                                                                                                        | 1.04                 | .57                |                      |                      |                  |                                                         |                 |                  |
| 6-10                                                                                                                                                                                                                                                                                                                       | .19                  | 0                  |                      |                      |                  |                                                         |                 |                  |
| 6-13                                                                                                                                                                                                                                                                                                                       | .04                  | 0                  |                      |                      |                  |                                                         |                 |                  |
| 6-15                                                                                                                                                                                                                                                                                                                       | .02                  | 0                  |                      |                      |                  |                                                         |                 |                  |
| 6-16                                                                                                                                                                                                                                                                                                                       | .68                  | 0                  |                      |                      |                  |                                                         |                 |                  |
| Watershed Conditions: Soil preparation by disking and then oats, timothy and clover were drilled in on March 29. At the time of the storm, the oats were 30" high and heading out; also a good stand of clover and timothy. Cultivation was parallel to the field boundaries without regard to the direction of the slope. |                      |                    |                      |                      |                  |                                                         |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 4.52.<br>1/ Beginning of second storm June 17, 1935.<br>2/ Rate estimated.                                                                                                                                                                                           |                      |                    |                      |                      |                  |                                                         |                 |                  |



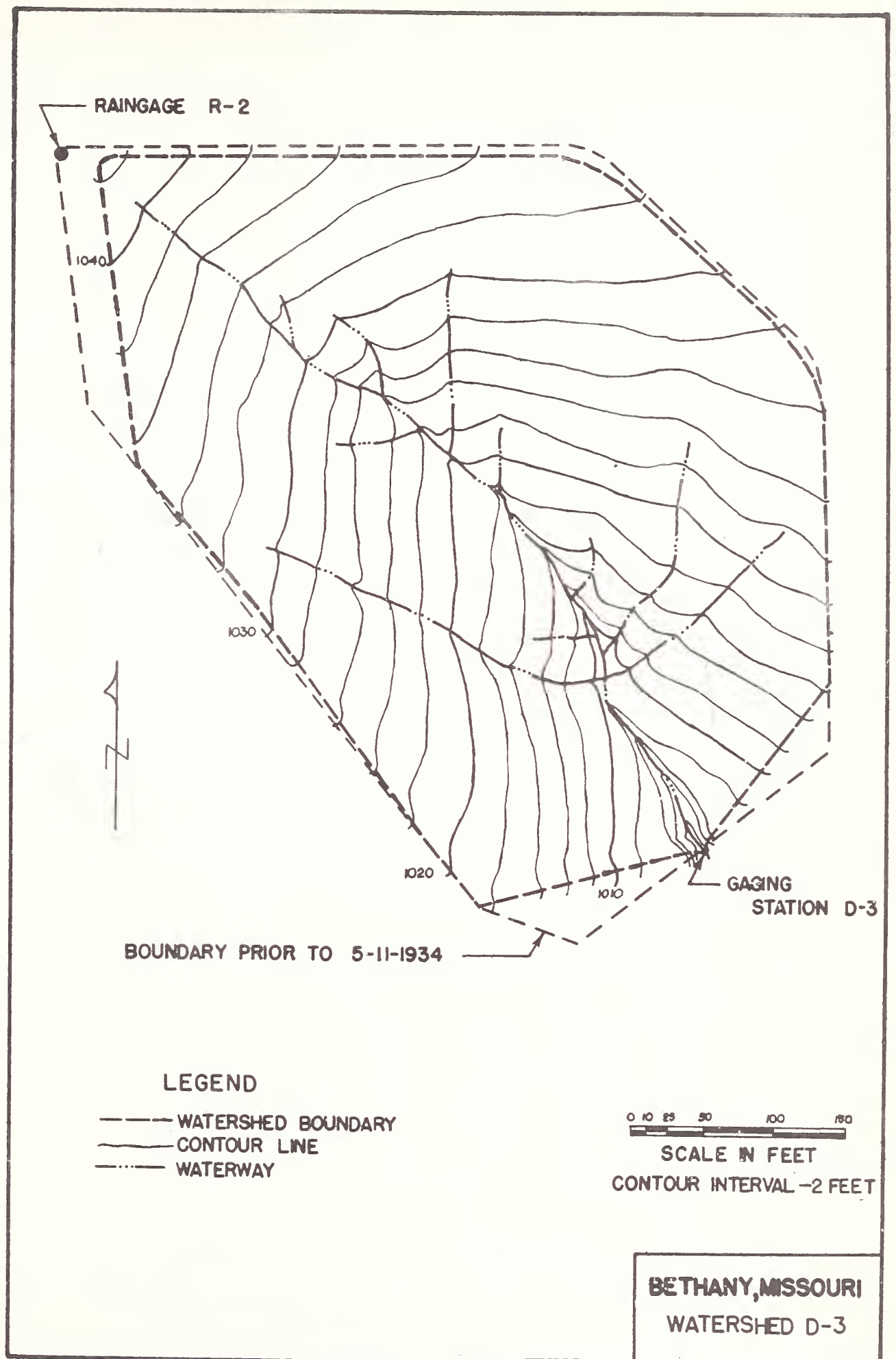
BETHANY, MISSOURI

Watershed D-3



BETHANY, MISSOURI

Watershed D-3







| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | Watershed 183 (26.29) |                   |               | Area 74.2 acres |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|-----------------------|-------------------|---------------|-----------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                 | Rainfall              |                   |               | Runoff          |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                    | Rainfall (inches) | Runoff (inches) | Date and time         | Intensity (in/hr) | Acc. (inches) | Date and time   | Rate (in/hr) | Acc. (inches) |
| Event of June 16, 1946                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                 |                       |                   |               |                 |              |               |
| 5-15-46                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 | 0.015           | 6-16-46               | Raingage          | 119           | 6-16-46         |              |               |
| 5-16                                                                                                                                                                                                                                                                                                                                                                                                                    | .33               | .019            | 8:40p                 | 0                 | 0             | 9:02p           | 0.001        | 0             |
| 5-17                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                 | .017            | :44                   | .30               | .02           | :12             | .014         | .001          |
| 5-18                                                                                                                                                                                                                                                                                                                                                                                                                    | .23               | .022            | :52                   | 1.28              | .19           | :14             | .058         | .001          |
| 5-19                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                 | .015            | 9:04                  | 1.20              | .43           | :18             | .311         | .011          |
| 5-20                                                                                                                                                                                                                                                                                                                                                                                                                    | .78               | .097            | :12                   | 3.38              | .88           | :21             | .735         | .035          |
| 5-21                                                                                                                                                                                                                                                                                                                                                                                                                    | .06               | .064            | :16                   | 5.10              | 1.22          | :30             | 2.25         | .276          |
| 5-22-23                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 | .051            | :20                   | 5.25              | 1.57          | :36             | 2.58         | .519          |
| 5-24                                                                                                                                                                                                                                                                                                                                                                                                                    | .05               | .018            | :24                   | 6.00              | 1.97          | :39             | 2.25         | .640          |
| 5-25                                                                                                                                                                                                                                                                                                                                                                                                                    | .33               | .040            | :32                   | 3.98              | 2.50          | :47             | 1.25         | .862          |
| 5-26                                                                                                                                                                                                                                                                                                                                                                                                                    | .32               | .051            | :36                   | 2.85              | 2.69          | :52             | 1.44         | .974          |
| 5-27                                                                                                                                                                                                                                                                                                                                                                                                                    | .89               | .259            | :48                   | 1.80              | 3.05          | :56             | 1.34         | 1.067         |
| 5-28                                                                                                                                                                                                                                                                                                                                                                                                                    | .03               | .031            | :52                   | 1.20              | 3.13          | 10:18           | .414         | 1.384         |
| 5-29-30                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 | .108            | 10:00                 | .98               | 3.26          | :28             | .230         | 1.435         |
| 5-31                                                                                                                                                                                                                                                                                                                                                                                                                    | .09               | .033            | :20                   | .03               | 3.27          | :48             | .106         | 1.487         |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                     | .39               | .046            | 6-16-46               | Raingage          | 108           | 11:08           | .069         | 1.517         |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                     | .15               | .061            | 8:44p                 | 0                 | 0             | :24             | .060         | 1.534         |
| 6-3                                                                                                                                                                                                                                                                                                                                                                                                                     | .02               | .026            | :48                   | 1.80              | .12           |                 |              |               |
| 6-4                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                 | .020            | :50                   | .90               | .15           |                 |              |               |
| 6-5                                                                                                                                                                                                                                                                                                                                                                                                                     | T                 | .015            | :56                   | .50               | .20           |                 |              |               |
| 6-6-9                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                 | .019            | 9:00                  | 1.50              | .30           |                 |              |               |
| 6-10                                                                                                                                                                                                                                                                                                                                                                                                                    | .02               | .002            | :04                   | 2.40              | .46           |                 |              |               |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                                                    | .70               | .002            | :16                   | 2.90              | 1.04          |                 |              |               |
| 6-12                                                                                                                                                                                                                                                                                                                                                                                                                    | .72               | .005            | :20                   | 4.20              | 1.32          |                 |              |               |
| 6-13-15                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 | .103            | :24                   | 4.80              | 1.64          |                 |              |               |
| 6-16 to 8-40p                                                                                                                                                                                                                                                                                                                                                                                                           | 0                 | .004            | :28                   | 5.40              | 2.00          |                 |              |               |
| Watershed Conditions: 12% of the area was in corn with straight row cultivation. Corn 9" high. Weeds 6" high. 12% of the area was in wheat and 9% in oats. Wheat 36" high, weeds 12". 30% of the area was in meadow. Clover 11" high, grass 18", weeds 11" high. 24% of the area was in pasture. Pasture grasses were 12" high and weeds 9". 12% of the area was in woods and 1% in farmsteads and miscellaneous cover. |                   |                 | :32                   | 3.60              | 2.24          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | :41                   | 2.80              | 2.66          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | :44                   | .40               | 2.68          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | :53                   | 2.13              | 3.00          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | 10:00                 | 1.37              | 3.16          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | :04                   | .60               | 3.20          |                 |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | :36                   | .04               | 3.22          |                 |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 74.8167.                                                                                                                                                                                                                                                                                                                                                          |                   |                 |                       |                   |               |                 |              |               |

| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    | Watershed 183    |                      |                  | (26.29)          |                 |                  | Area - 74.2 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of August 16, 1947                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-15-47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.39                 | 0.003              | 8-16-47          | Raingage             | 119              | 8-16-47          |                 |                  |                   |  |  |
| 7-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .02                  | .001               | 3:00p            | 0                    | 0                | 3:08p            | 0.002           | 0                |                   |  |  |
| 7-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .001               | :04              | .15                  | .01              | :12              | .005            | T                |                   |  |  |
| 7-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1.30                 | .079               | :12              | .90                  | .13              | :16              | .018            | .001             |                   |  |  |
| 7-19-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .019               | :20              | 3.22                 | .56              | :20              | .046            | .003             |                   |  |  |
| 7-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | T                    | .004               | :24              | 3.45                 | .79              | :26              | .246            | .017             |                   |  |  |
| 7-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .04                  | .003               | :30              | 2.00                 | .99              | :33              | .388            | .054             |                   |  |  |
| 7-23-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .006               | :36              | .80                  | 1.07             | :36              | .349            | .072             |                   |  |  |
| 7-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .33                  | .004               |                  |                      |                  | :42              | .251            | .103             |                   |  |  |
| 7-28-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .003               |                  |                      |                  | :44              | .209            | .110             |                   |  |  |
| 7-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | T                    | 0                  | 8-16-47          | Raingage             | 108              | :48              | .163            | .123             |                   |  |  |
| 8-1-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | 0                  | 2:56p            | 0                    | 0                | :50              | .183            | .128             |                   |  |  |
| 8-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | T                    | 0                  | 3:01             | .84                  | .07              | :54              | .140            | .139             |                   |  |  |
| 8-8-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0                    | 0                  | :04              | .60                  | .10              | 4:03             | .095            | .157             |                   |  |  |
| 8-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .13                  | 0                  | :11              | 2.31                 | .37              | :20              | .050            | .177             |                   |  |  |
| 8-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .63                  | .003               | :14              | 4.60                 | .60              | :40              | .023            | .189             |                   |  |  |
| 8-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .04                  | 0                  | :20              | 3.40                 | .94              | 5:00             | .013            | .195             |                   |  |  |
| 8-16 to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                    | :24              | 2.70                 | 1.12             |                  |                 |                  |                   |  |  |
| 3:00p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.07                 | .023               | :30              | .90                  | 1.21             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    | :34              | .30                  | 1.23             |                  |                 |                  |                   |  |  |
| Watershed Conditions: 16% of the area was in corn with straight row cultivation. Corn plants 48" high; weeds 30". 21% of the area in 1947 was in wheat which was harvested in July. This area was followed by meadow, 26% of the area was in meadow besides the area which was in wheat making a total of 47% area in meadow. Grass 8" high and weeds 12". 24% of the area was in pasture. These grasses were 5" high and weeds 5" high. 12% of the area was in woods and 1% in miscellaneous cover. |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 74.8167.                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

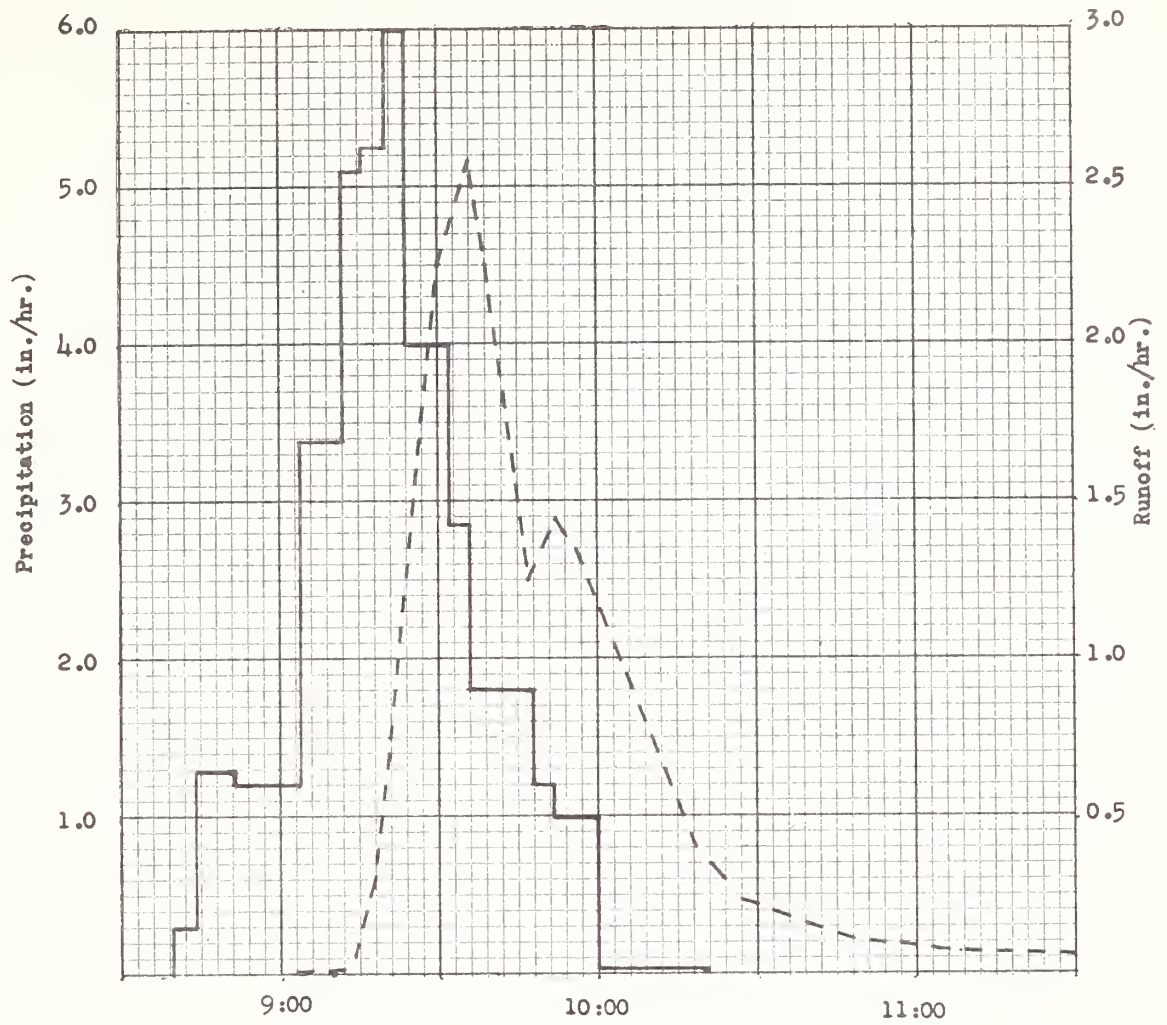
| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | Watershed 183    |                      |                  | (26.29)          |                 |                  | Area - 74.2 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of Sept. 1, 1950                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-31-50                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.37                 | 0.009              | 9-1-50           | Raingage             | 119              | 9-1-50           |                 |                  |                   |  |  |
| 8-1-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | .002               | 9:36p            | 0                    | 0                | 9:44p            | 0               | 0                |                   |  |  |
| 8-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | .16                  | 0                  | :44              | .60                  | .08              | 10:06            | .0142           | T                |                   |  |  |
| 8-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                    | 0                  | :50              | .10                  | .09              | :12              | .0618           | .004             |                   |  |  |
| 8-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .14                  | .001               | 10:00            | 2.10                 | .44              | :19              | .114            | .014             |                   |  |  |
| 8-12-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      | 0                  | :12              | 2.55                 | .95              | :23              | .159            | .024             |                   |  |  |
| 8-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .56                  | .015               | :30              | 2.87                 | 1.81             | :28              | .287            | .042             |                   |  |  |
| 8-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .06                  | .002               | :36              | 4.00                 | 2.21             | :40              | .966            | .162             |                   |  |  |
| 8-20-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | 0                  | :44              | 3.45                 | 2.67             | :44              | 1.04            | .229             |                   |  |  |
| 8-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .04                  | 0                  | :58              | 1.46                 | 3.01             | :50              | .957            | .329             |                   |  |  |
| 8-29                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | 0                  | 11:08            | 3.24                 | 3.55             | :54              | 1.05            | .396             |                   |  |  |
| 8-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .32                  | 0                  | :12              | 1.05                 | 3.62             | 11:02            | .938            | .528             |                   |  |  |
| 8-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .25                  | 0                  | :18              | 2.80                 | 3.90             | :12              | 1.63            | .738             |                   |  |  |
| Watershed Conditions: 21% of the area was in corn with straight row cultivation. Corn was 72" high, weeds 18". 4% of the area was in wheat and 8% in oats but both of these crops had been harvested and the stubble remained. The wheat area went into meadow. 30% of the area was in meadow. Legumes and grasses were 9" high. Weeds were 8" high. 24% of the area was in pasture. Grass and weeds were 6" high. 12% of the area was in woods and 1% in miscellaneous cover. |                      |                    | :28              | 1.92                 | 4.22             | :16              | 1.76            | .851             |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :38              | .36                  | 4.28             | :24              | 1.43            | 1.067            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :40              | 1.80                 | 4.34             | :38              | .948            | 1.343            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :48              | .15                  | 4.36             | :42              | .735            | 1.399            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 12:00            | .05                  | 4.37             | :56              | .428            | 1.529            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 12:00            | .275            | 1.553            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | :10              | .140            | 1.587            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 9-1-50           | Raingage             | 108              | :16              | .0981           | 1.599            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 9:36p            | 0                    | 0                | :35              | .0461           | 1.619            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 10:00            | 1.73                 | .69              | 1:16             | .0187           |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :08              | 1.20                 | .85              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :20              | 2.30                 | 1.31             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :28              | 3.23                 | 1.74             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :36              | 3.60                 | 2.22             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :40              | 2.25                 | 2.37             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :48              | 3.00                 | 2.77             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :58              | 1.56                 | 3.03             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 11:04            | 4.10                 | 3.44             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :12              | 2.25                 | 3.74             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :15              | .80                  | 3.78             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :20              | 3.48                 | 4.07             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :24              | 1.20                 | 4.15             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :28              | 1.50                 | 4.25             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :37              | .40                  | 4.31             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :40              | 1.00                 | 4.36             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | 12:00            | .09                  | 4.39             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | :40a             | .03                  | 4.41             |                  |                 |                  |                   |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 74.8167.

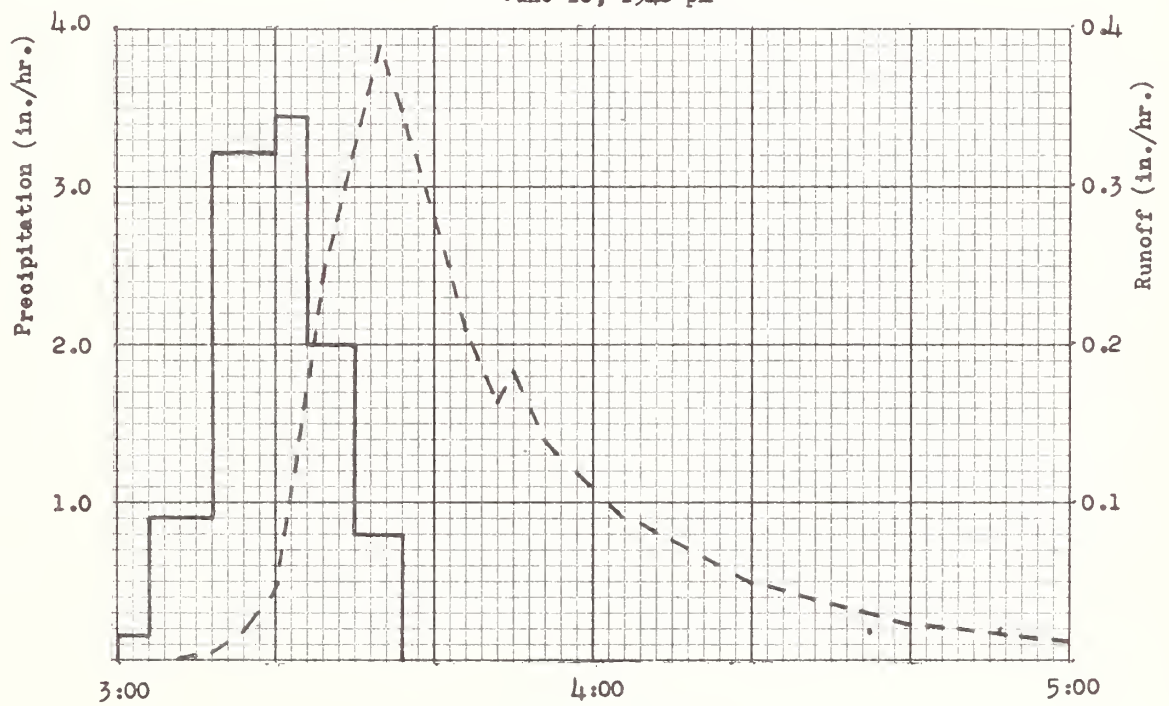
Notes: To convert runoff in in/hr to cfs, multiply by 74.8167.



| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | Watershed 183    |                      |                  | (26.29)          |                 |                  | Area - 74.2 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                          |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of June 12, 1957                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 5-11-57                                                                                                                                                                                                                                                                                                                                                                                        | 0.52                 | 0.009              | 6-12-57          | Raingage             | 119              | 6-12-57          |                 |                  |                   |  |  |
| 5-12                                                                                                                                                                                                                                                                                                                                                                                           | .33                  | .017               | 3:15p            | 0                    | 0                | 3:20p            | 0.0003          | 0                |                   |  |  |
| 5-13                                                                                                                                                                                                                                                                                                                                                                                           | T                    | .003               | :21              | 1.30                 | .13              | :36              | .0218           | .001             |                   |  |  |
| 5-14                                                                                                                                                                                                                                                                                                                                                                                           | 1.56                 | .252               | :26              | .48                  | .17              | :39              | .0434           | .002             |                   |  |  |
| 5-15                                                                                                                                                                                                                                                                                                                                                                                           | .02                  | .043               | :30              | 2.40                 | .33              | :42              | .140            | .007             |                   |  |  |
| 5-16-17                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | .022               | :35              | 1.80                 | .48              | :45              | .374            | .019             |                   |  |  |
| 5-18                                                                                                                                                                                                                                                                                                                                                                                           | .19                  | .009               | :39              | 6.00                 | .88              | :48              | .855            | .048             |                   |  |  |
| 5-19                                                                                                                                                                                                                                                                                                                                                                                           | .26                  | .016               | :42              | 2.80                 | 1.02             | :52              | 1.52            | .132             |                   |  |  |
| 5-20                                                                                                                                                                                                                                                                                                                                                                                           | .14                  | .020               | :45              | 6.00                 | 1.32             | :56              | 1.66            | .237             |                   |  |  |
| 5-21                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .013               | :48              | 4.00                 | 1.52             | 4:00             | 2.11            | .359             |                   |  |  |
| 5-22                                                                                                                                                                                                                                                                                                                                                                                           | .52                  | .071               | :50              | 6.30                 | 1.73             | :04              | 2.50            | .514             |                   |  |  |
| 5-23-25                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | .036               | :54              | 4.35                 | 2.02             | :06              | 2.42            | .597             |                   |  |  |
| 5-26                                                                                                                                                                                                                                                                                                                                                                                           | .18                  | .006               | :58              | 3.60                 | 2.26             | :12              | 1.20            | .779             |                   |  |  |
| 5-27-31                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | .020               | 4:01             | 3.20                 | 2.42             | :14              | 1.10            | .817             |                   |  |  |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                            | .06                  | .004               | :04              | 4.00                 | 2.62             | :18              | .838            | .882             |                   |  |  |
| 6-2-6                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | .012               | :09              | .48                  | 2.66             | :24              | .528            | .951             |                   |  |  |
| 6-7                                                                                                                                                                                                                                                                                                                                                                                            | 0                    | 0                  | :11              | 1.20                 | 2.70             | :30              | .385            | .996             |                   |  |  |
| 6-8                                                                                                                                                                                                                                                                                                                                                                                            | .96                  | .011               | :30              | .06                  | 2.72             | :34              | .299            | 1.019            |                   |  |  |
| 6-9-10                                                                                                                                                                                                                                                                                                                                                                                         | 0                    | .004               | :55              | .26                  | 2.83             | :46              | .140            | 1.060            |                   |  |  |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                           | .40                  | .006               | 5:30             | .05                  | 2.86             | 5:10             | .0552           | 1.095            |                   |  |  |
| Watershed Conditions: 4% of the area was in corn with straight row cultivation. Corn was 12" high; weeds 9" high. 7% of the area was in wheat. Wheat plants were 32" high and weeds 4". 51% of the area was in meadow. Legumes and grasses were 12" high. 23% of the area was in pasture. Grasses, legumes and weeds were 5" high. 14% of the area was in woods and 1% in miscellaneous cover. |                      |                    |                  |                      |                  | 7:00             | .0202           | 1.149            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 10:00            | .0075           | 1.187            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 12:00Mid         | .0050           | 1.200            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 6-13-57          |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 12:00N           | .0013           | 1.234            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 6-12-57          | Raingage        | 108              |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | 3:09p            | 0               | 0                |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | :16              | .51             | .06              |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | :20              | 1.20            | .14              |                   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  | :25              | .60             | .19              |                   |  |  |
| :30                                                                                                                                                                                                                                                                                                                                                                                            | 3.84                 | .51                |                  |                      |                  |                  |                 |                  |                   |  |  |
| :32                                                                                                                                                                                                                                                                                                                                                                                            | 3.90                 | .64                |                  |                      |                  |                  |                 |                  |                   |  |  |
| :42                                                                                                                                                                                                                                                                                                                                                                                            | 4.56                 | 1.40               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :48                                                                                                                                                                                                                                                                                                                                                                                            | 6.00                 | 2.00               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :50                                                                                                                                                                                                                                                                                                                                                                                            | 3.90                 | 2.13               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :52                                                                                                                                                                                                                                                                                                                                                                                            | 2.10                 | 2.20               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :56                                                                                                                                                                                                                                                                                                                                                                                            | 9.00                 | 2.80               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :58                                                                                                                                                                                                                                                                                                                                                                                            | 4.00                 | 3.00               |                  |                      |                  |                  |                 |                  |                   |  |  |
| 4:00                                                                                                                                                                                                                                                                                                                                                                                           | 1.50                 | 3.05               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :13                                                                                                                                                                                                                                                                                                                                                                                            | .09                  | 3.07               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :16                                                                                                                                                                                                                                                                                                                                                                                            | .60                  | 3.10               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :23                                                                                                                                                                                                                                                                                                                                                                                            | .17                  | 3.12               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :36                                                                                                                                                                                                                                                                                                                                                                                            | .23                  | 3.17               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :43                                                                                                                                                                                                                                                                                                                                                                                            | .34                  | 3.21               |                  |                      |                  |                  |                 |                  |                   |  |  |
| :52                                                                                                                                                                                                                                                                                                                                                                                            | .13                  | 3.23               |                  |                      |                  |                  |                 |                  |                   |  |  |
| 5:23                                                                                                                                                                                                                                                                                                                                                                                           | .04                  | 3.25               |                  |                      |                  |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 74.8167.                                                                                                                                                                                                                                                                                                                                 |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

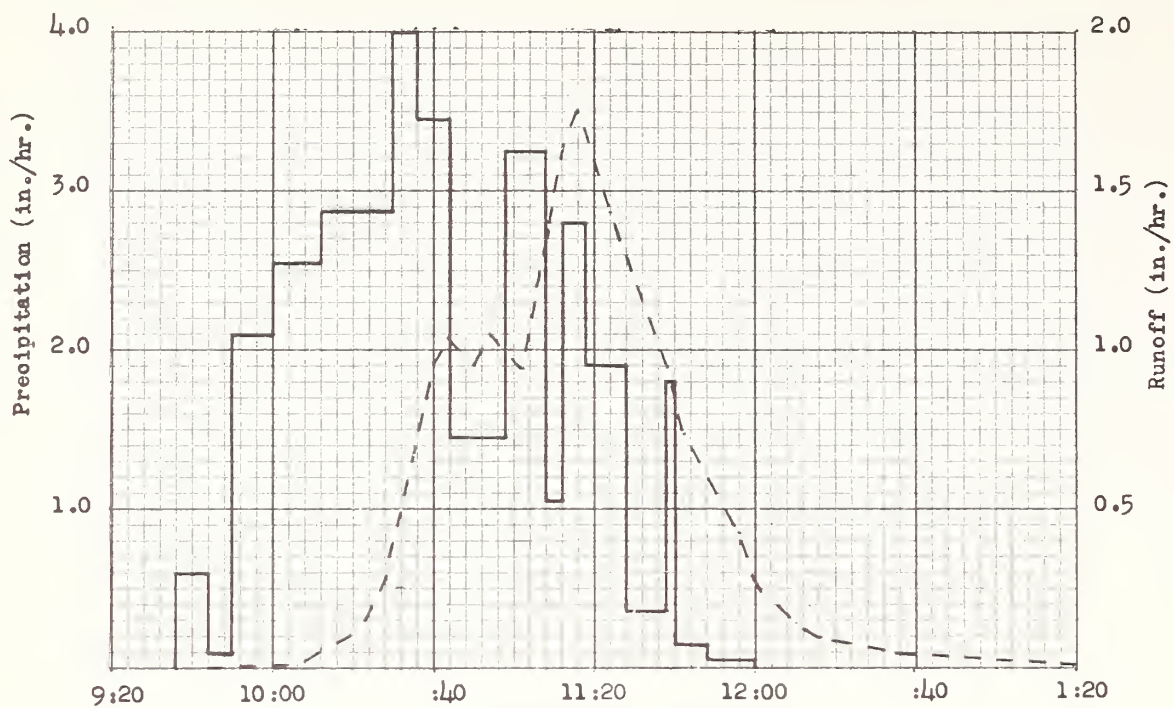


June 16, 1946 pm

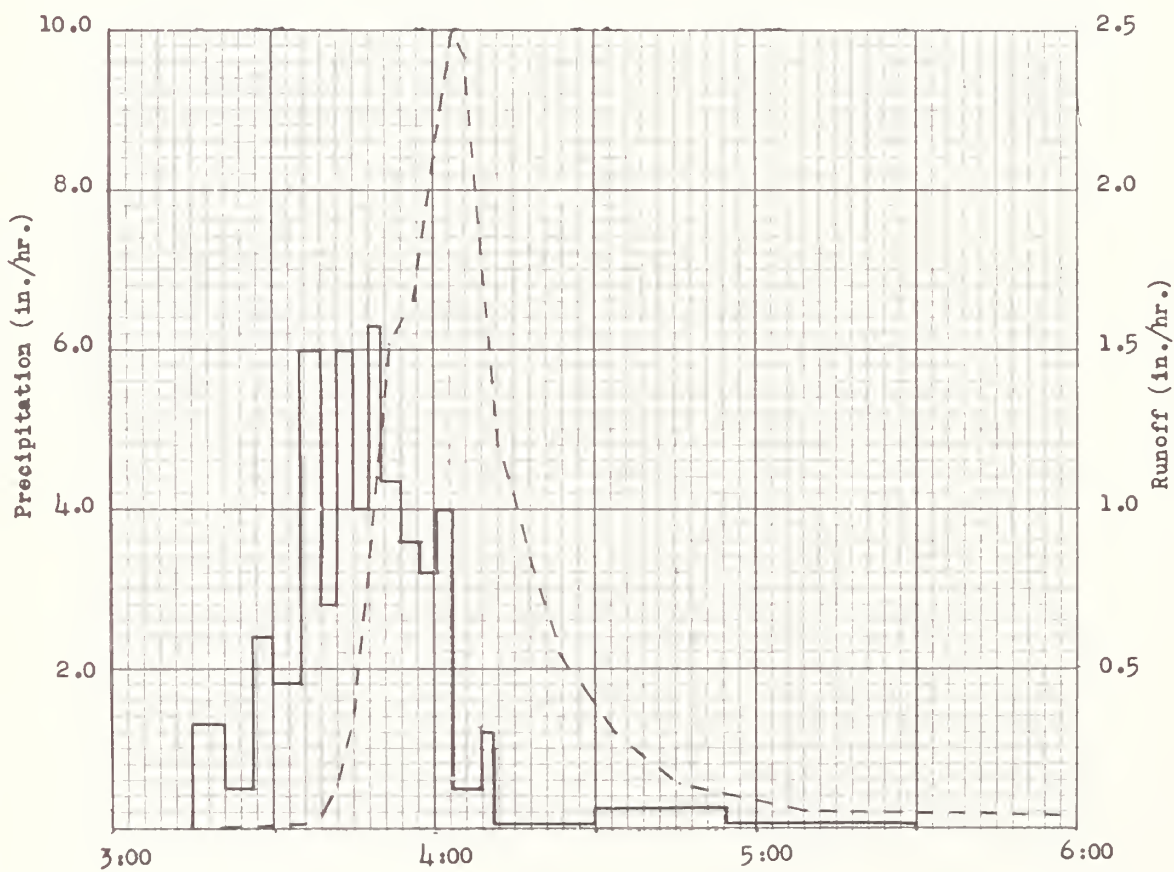


August 16, 1947 pm

COSHOCTON, OHIO WATERSHED 183



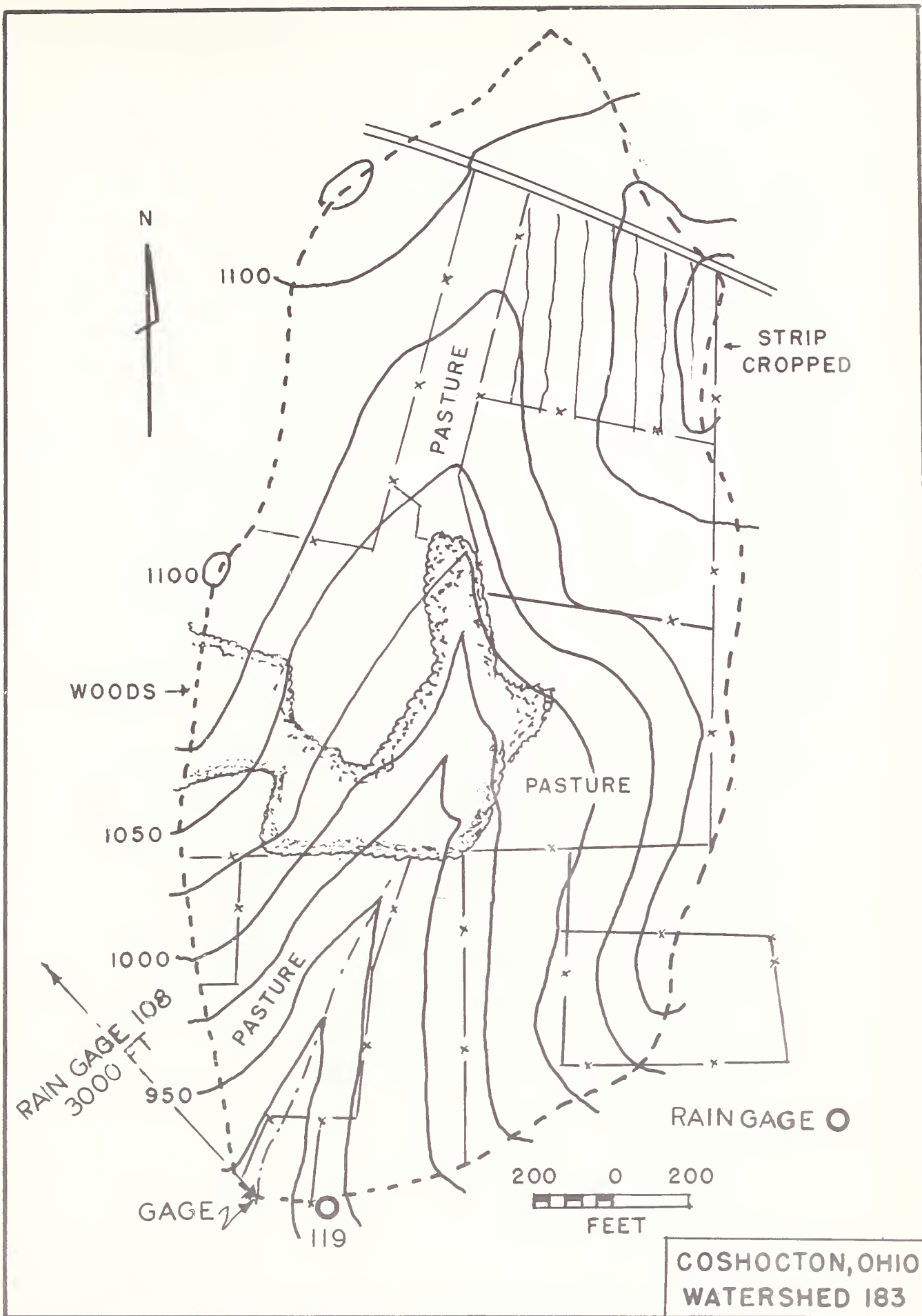
September 1, 1950 pm



June 12, 1957

COSHOCTON, OHIO WATERSHED 183





COSHOCTON, OHIO  
WATERSHED 183





| Coshocton, Ohio      Watershed 196      (26.30)      Area - 303 acres                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |                            |                      |                  |                  |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | Rainfall                   |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time           | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 16, 1946                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    |                            |                      |                  |                  |                 |                  |
| 5-15-46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | 0.0280             | 6-16-46                    | Raingage             | 108              | 6-16-46          |                 |                  |
| 5-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .33                  | .0354              | 8:44p                      | 0                    | 0                | 8:30p            | 0.0009          | 0                |
| 5-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | .0337              | :48                        | 1.80                 | .12              | 9:18             | .0177           | .0059            |
| 5-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .15                  | .0336              | :50                        | .90                  | .15              | :20              | .0262           | .0066            |
| 5-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | .0259              | :56                        | .50                  | .20              | :26              | .393            | .0249            |
| 5-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .78                  | .044               | 9:00                       | 1.50                 | .30              | :28              | .769            | .0452            |
| 5-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .08                  | .0840              | :04                        | 2.40                 | .46              | :32              | 1.06            | .1052            |
| 5-22-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | .0777              | :16                        | 2.90                 | 1.04             | :40              | 1.86            | .3060            |
| 5-24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .04                  | .0301              | :20                        | 4.20                 | 1.32             | :42              | 1.90            | .3688            |
| 5-25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .51                  | .0537              | :24                        | 4.80                 | 1.64             | :48              | 1.60            | .5442            |
| 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .34                  | .0585              | :28                        | 5.40                 | 2.00             | :49              | 1.41            | .5692            |
| 5-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .91                  | .3089              | :32                        | 3.60                 | 2.24             | :57              | 1.07            | .7351            |
| 5-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .03                  | .1578              | :41                        | 2.80                 | 2.66             | :58              | 1.15            | .7535            |
| 5-29-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | .1656              | :44                        | .40                  | 2.68             | 10:00            | 1.20            | .7927            |
| 5-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .09                  | .0537              | :53                        | 2.13                 | 3.00             | :01              | 1.31            | .8135            |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .35                  | .0606              | 10:00                      | 1.37                 | 3.16             | :02              | 1.19            | .8343            |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .18                  | .0758              | :04                        | .60                  | 3.20             | :12              | .861            | 1.0082           |
| 6-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .02                  | .0401              | :36                        | .04                  | 3.22             | :28              | .458            | 1.1880           |
| 6-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0308              | 12:00m                     | .11                  | 3.38             | :34              | .306            | 1.2248           |
| 6-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                    | .0255              | 6-17-46                    |                      |                  | :40              | .245            | 1.2524           |
| 6-6-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | .0699              | 12:12a                     | .10                  | 3.40             | :54              | .170            | 1.3009           |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .01                  | .0089              | 1:00                       | .12                  | 3.50             | 11:14            | .107            | 1.3461           |
| 6-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .72                  | .0109              | :12                        | .20                  | 3.54             | :50              | .0766           | 1.3991           |
| 6-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .77                  | .1082              | :48                        | .07                  | 3.58             | 6-17-46          |                 |                  |
| 6-14-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | .0281              | 2:20                       | .26                  | 3.72             | 12:30a           | .0642           | 1.4449           |
| 6-16 to<br>8:30p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .0089              | :48                        | .21                  | 3.82             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 3:32                       | .19                  | 3.96             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 5:20                       | .09                  | 4.12             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | Clock stopped<br>no record |                      | 4.17             |                  |                 |                  |
| <u>Watershed Conditions:</u> 9% of<br>the area was in corn with<br>straight row cultivation;<br>corn plants were 9" high and<br>weeds 6"; 4% of the area was<br>in oats, no record of height;<br>3% of the area was in wheat,<br>the plants being 36" high and<br>the weeds 12"; 27% of the area<br>was in meadow; clover 11", grass<br>18" and weeds 11" high; 24% of<br>the area was in pasture. Pasture<br>grasses averaged 12" high and<br>weeds 9"; 28% of the area was in<br>woodland and 5% in miscellaneous<br>cover. |                      |                    | 6-16-46                    | Raingage             | 107              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:44p                      | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:40a                      |                      | 3.65             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 6-16-46                    | Raingage             | 109              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:44p                      | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:34a                      |                      | 3.75             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 6-16-46                    | Raingage             | 113              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:40p                      | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:30a                      |                      | 3.42             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 6-16-46                    | Raingage             | 116              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 8:44p                      | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | 5:20a                      |                      | 4.39             |                  |                 |                  |

Notes: To convert runoff in in/hr to cfs, multiply by 305.521.

| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of August 16, 1947</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  |                  |                 |                  |
| 7-15-47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.40                 | 0.0106             | 8-16-47          | Raingage             | 1.08             | 8-16-47          |                 |                  |
| 7-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .06                  | .0085              | 2:56p            | 0                    | 0                | 2:30p            | 0.0030          | 0                |
| 7-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .0063              | 3:01             | .84                  | .07              | 3:00             | .0023           | .0014            |
| 7-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.50                 | .1096              | :04              | .60                  | .10              | :15              | .0118           | .0031            |
| 7-19-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0407              | :11              | 2.31                 | .37              | :22              | .0152           | .0047            |
| 7-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T                    | .0101              | :14              | 4.60                 | .60              | :28              | .0524           | .0079            |
| 7-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .10                  | .0091              | :20              | 3.40                 | .94              | :32              | .275            | .0190            |
| 7-23-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0221              | :24              | 2.70                 | 1.12             | :34              | .524            | .0323            |
| 7-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .39                  | .0103              | :30              | .90                  | 1.21             | :38              | .586            | .0693            |
| 7-28-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0164              | :34              | .30                  | 1.23             | :44              | .419            | .1212            |
| 7-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T                    | .0038              | 4:00             | 0                    | 1.23             | :52              | .265            | .1674            |
| 8-1-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                    | .0210              | :20              | .03                  | 1.24             | 4:00             | .157            | .1959            |
| 8-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | .02                  | .0031              | 5:51             | 0                    | 1.24             | :10              | .0933           | .2169            |
| 8-8-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                    | .0139              | :56              | .48                  | 1.28             | :16              | .0717           | .2252            |
| 8-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .12                  | .0029              |                  |                      |                  | :30              | .0419           | .2383            |
| 8-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .61                  | .0091              | 8-16-47          | Raingage             | 1.07             | :50              | .0237           | .2491            |
| 8-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .02                  | .0044              | 3:00p            | 0                    | 0                |                  |                 |                  |
| 8-16 to<br>2:30p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.10                 | .0375              | 6:00             |                      | 1.10             |                  |                 |                  |
| <u>Watershed Conditions: 10% of the area was in corn with straight row cultivation; corn plants were 48" high and weeds 30"; 5% of the area was in oats which was cut July 31 to Aug. 4; oats stubble remained; 11% of the area was in wheat in 1947 but this was cut in July and was followed by meadow; 17% of the area was in meadow besides the area which was in wheat making a total of 28% in meadow. Grasses and clover averaged 8" and weeds 12" high; 24% of the area was in pasture. Grasses and weeds in pasture averaged 5" high; 28% of the area was in woodland and 5% in miscellaneous cover.</u> |                      |                    | 8-16-47          | Raingage             | 1.09             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 3:00p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 6:22             |                      | 1.12             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 8-16-47          | Raingage             | 1.13             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 2:56p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 6:02             |                      | 1.23             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 8-16-47          | Raingage             | 1.16             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 2:59p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | 6:06             |                      | 1.25             |                  |                 |                  |
| <u>Event of Sept. 1, 1950</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |
| 7-31-50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | .40                  | .0229              | 9-1-50           | Raingage             | 1.08             | 9-1-50           |                 |                  |
| 8-1-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                    | .0283              | 9:36p            | 0                    | 0                | 9:30p            | .0009           | 0                |
| 8-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | .17                  | .0030              | 10:00            | 1.73                 | .69              | 10:06            | .0152           | .0045            |
| 8-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T                    | .0035              | :08              | 1.20                 | .85              | :09              | .0538           | .0061            |
| 8-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .06                  | .0035              | :20              | 2.30                 | 1.31             | :10              | .104            | .0074            |
| 8-12-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0130              | :28              | 3.23                 | 1.74             | :16              | .127            | .0190            |
| 8-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .52                  | .0250              | :36              | 3.60                 | 2.22             | :24              | .226            | .0428            |
| 8-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T                    | .0043              | :40              | 2.25                 | 2.37             | :30              | .393            | .0734            |
| 8-20-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                    | .0160              | :48              | 3.00                 | 2.77             | :39              | .769            | .1641            |
| 8-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .04                  | .0021              | :58              | 1.56                 | 3.03             | :50              | .982            | .3241            |

Notes: To convert runoff in in/hr to cfs, multiply by 305.521.

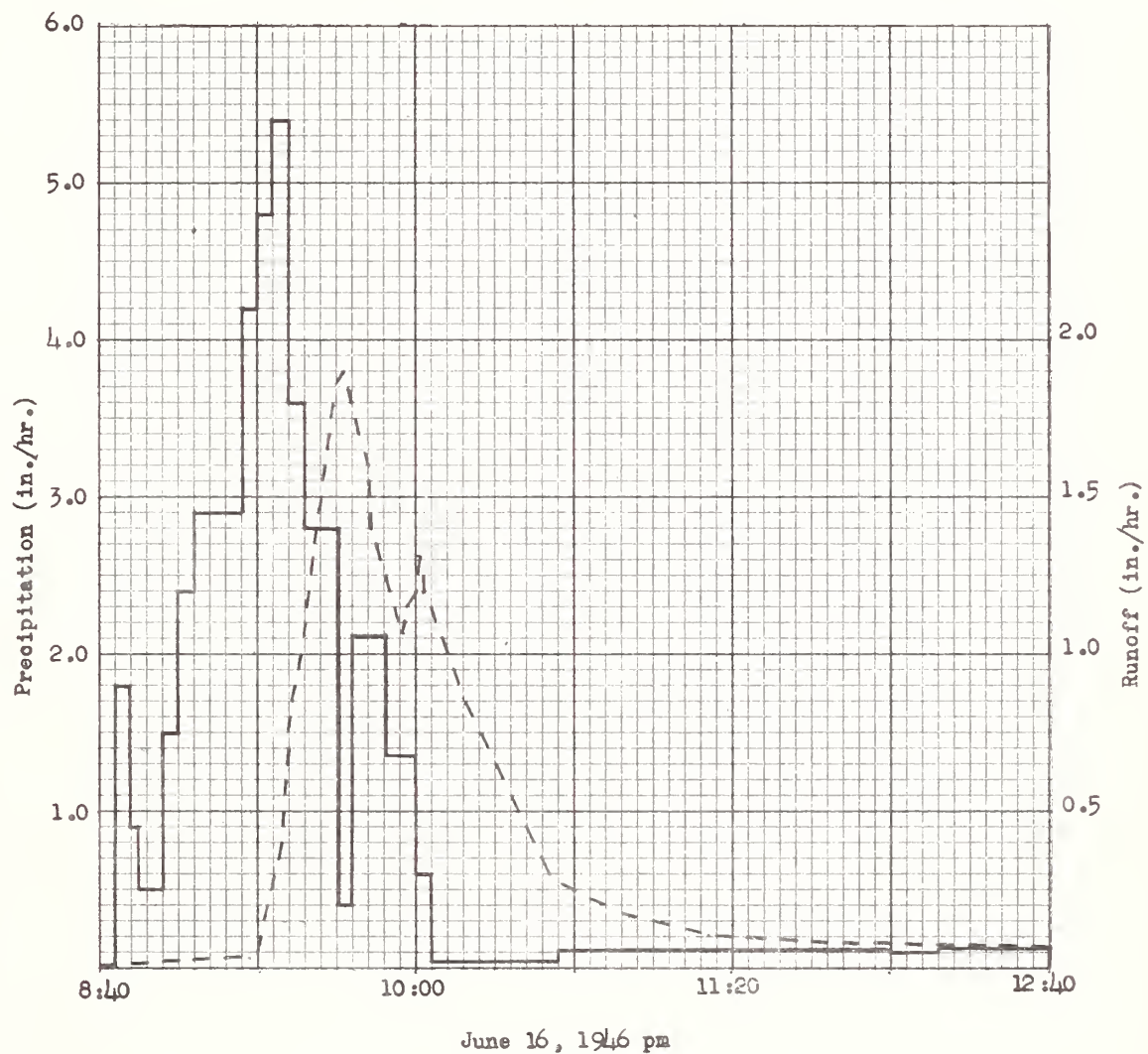
| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | Watershed 196    |                      |                  | (26.30) Area - 303 Acres |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|--------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | Rainfall         |                      |                  | Runoff                   |                 |                  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time         | Rate<br>(in/hr) | Acc.<br>(inches) |
| 8-29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                    | 0.0018             | 11:04            | 4.10                 | 3.44             | 10:56                    | 1.06            | 0.4262           |
| 8-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .50                  | .0102              | :12              | 2.25                 | 3.74             | 11:02                    | 1.31            | .5449            |
| 8-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .24                  | .0062              | :15              | .80                  | 3.78             | :10                      | 1.77            | .7561            |
| 9-1 to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .04                  | .0033              | :20              | 3.48                 | 4.07             | :22                      | 1.24            | 1.0577           |
| 9:30p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :24              | 1.20                 | 4.15             | :36                      | .743            | 1.2255           |
| <p>Watershed Conditions: 16% of the area was in corn with straight row cultivation. Corn plants were 72" high and weeds 18"; 1% of the area was in oats stubble, the crop having been harvested in August; 4% of the area had been in wheat which was followed by meadow. An additional 22% of the area was in first and second year meadow. Legumes and grasses averaged 9" high and weeds 8"; 24% of the area was in pasture. Grasses and weeds averaged 6" high; 28% of the area was in woodland and 5% in miscellaneous cover.</p> |                      |                    | :28              | 1.50                 | 4.25             | :48                      | .458            | 1.3483           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | :37              | .40                  | 4.31             | :52                      | .306            | 1.3728           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | :40              | 1.00                 | 4.36             | 12:00m                   | .183            | 1.6328           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 12:00            | .09                  | 4.39             | 9-2-50                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9-2-50           |                      |                  | 12:08a                   | .151            | 1.6551           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 12:40a           | .03                  | 4.41             | :20                      | .104            | 1.6799           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 1:28             | .01                  | 4.42             | 1:00                     | .0583           | 1.7312           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    |                  |                      |                  | 2:00                     | .0296           | 1.7751           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9-1-50           | Raingage             | 107              |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9:24p            | 0                    | 0                |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 12:28a           |                      | 4.24             |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9-1-50           | Raingage             | 109              |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9:38p            | 0                    | 0                |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 12:00m           |                      | 4.15             |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9-1-50           | Raingage             | 113              |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9:35p            | 0                    | 0                |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 11:51            |                      | 4.70             |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9-1-50           | Raingage             | 116              |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 9:33p            | 0                    | 0                |                          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                    | 12:00m           |                      | 4.61             |                          |                 |                  |
| Event of June 12, 1957                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |                    |                  |                      |                  |                          |                 |                  |
| 5-11-57                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .64e                 | .0346              | 6-12-57          | Raingage             | 108              | 6-12-57                  |                 |                  |
| 5-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .23e                 | .0472              | 3:09p            | 0                    | 0                | 3:00p                    | .0003           | 0                |
| 5-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                    | .0158              | :16              | .51                  | .06              | :35                      | .0245           | .0031            |
| 5-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.79                 | .3057              | :20              | 1.20                 | .14              | :36                      | .0334           | .0036            |
| 5-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .04                  | .0800              | :25              | .60                  | .19              | :42                      | .0841           | .0100            |
| 5-16-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .0698              | :30              | 3.84                 | .51              | :46                      | .275            | .0218            |
| 5-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .16                  | .0332              | :32              | 3.90                 | .64              | :51                      | .982            | .0724            |
| 5-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .26                  | .0382              | :42              | 4.56                 | 1.40             | :54                      | 1.60            | .1356            |
| 5-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .17                  | .0450              | :48              | 6.00                 | 2.00             | :59                      | 3.50            | .3468            |
| 5-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                    | .0324              | :50              | 3.90                 | 2.13             | 4:02                     | 3.72            | .5273            |
| 5-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .50                  | .1091              | :52              | 2.10                 | 2.20             | :12                      | 1.60            | .9662            |
| 5-23-25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .1141              | :56              | 9.00                 | 2.80             | :18                      | .998            | 1.0967           |
| 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .14                  | .0308              | :58              | 4.00                 | 3.00             | :22                      | .769            | 1.1562           |
| 5-27-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .0737              | 4:00             | 1.50                 | 3.05             | :30                      | .543            | 1.2437           |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .10                  | .0114              | :13              | .09                  | 3.07             | :34                      | .458            | 1.2770           |
| 6-2-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0                    | .0438              | :16              | .60                  | 3.10             | :38                      | .317            | 1.3028           |
| 6-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .88                  | .0259              | :23              | .17                  | 3.12             | :40                      | .183            | 1.3112           |
| 6-9-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0150              | :36              | .23                  | 3.17             | 6:00                     | .0642           | 1.4668           |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .35                  | .0125              | :43              | .34                  | 3.21             |                          |                 |                  |
| 6-12 to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .0054              | :52              | .13                  | 3.23             |                          |                 |                  |
| 3:00p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 5:23             | .04                  | 3.25             |                          |                 |                  |

Notes: To convert runoff in in/hr to cfs, multiply by 305.521.

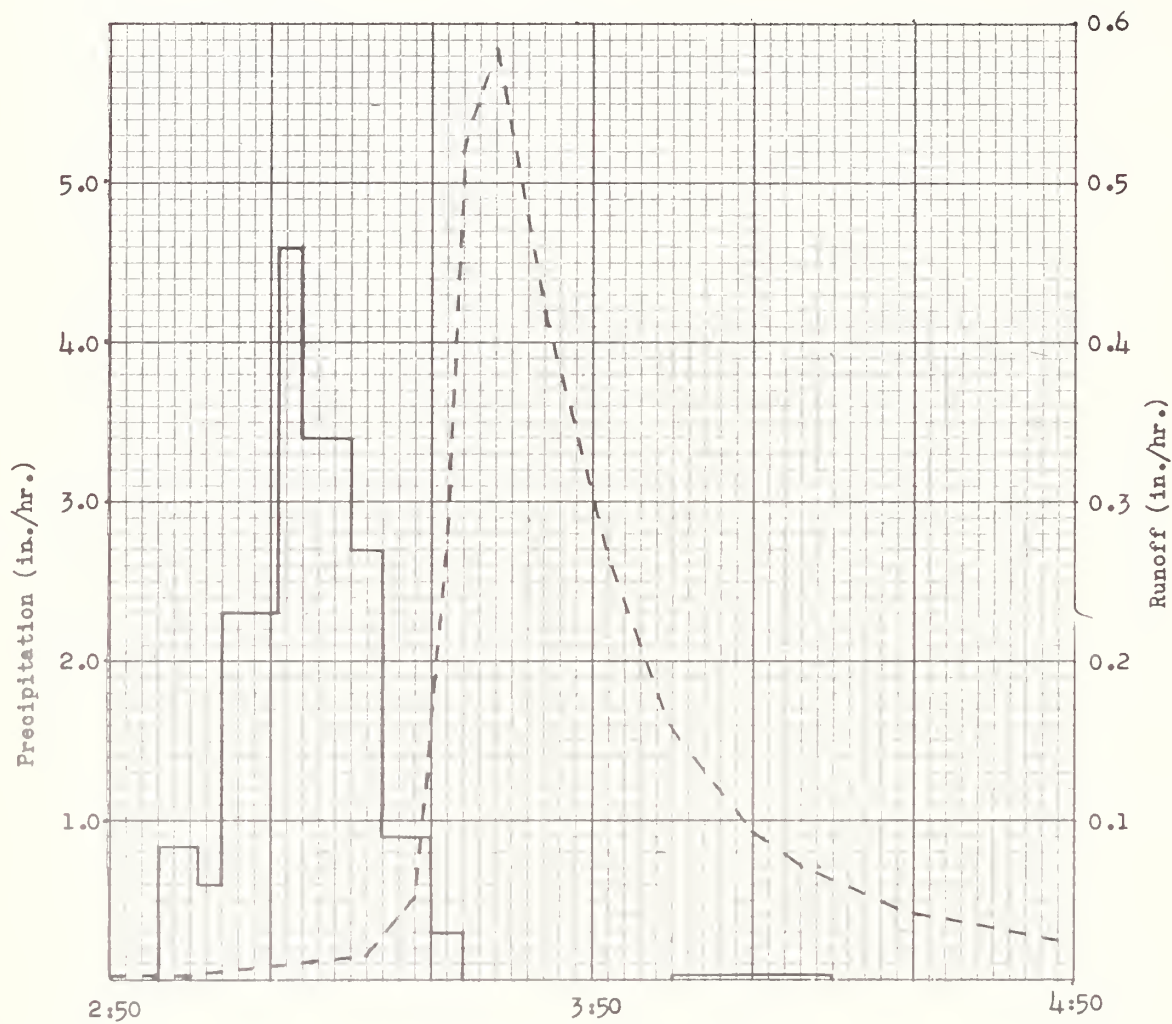


| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                                                                                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <p>Watershed Conditions: 4% of the area was in corn with straight row cultivation. Corn plants were 12" high and weeds 9"; 12% of the area was in wheat. Wheat plants were 32" high and weeds 4"; 23% of the area was in meadow. Legumes and grasses averaged 12" high; 28% of the area was in pasture. Grasses, legumes and weeds averaged 5" high; 28% of the area was in woodland and 5% in miscellaneous cover.</p> |                      |                    | 6-12-57          | Raingage             | 107              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 3:07p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 5:30             |                      | 3.53             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6-12-57          | Raingage             | 109              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 3:10p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 5:30             |                      | 3.34             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6-12-57          | Raingage             | 113              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 3:16p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 5:24             |                      | 3.24             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6-12-57          | Raingage             | 116              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 3:15p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 5:45             |                      | 2.90             |                  |                 |                  |

Notes: To convert runoff in in/hr to cfs, multiply by 305.521.

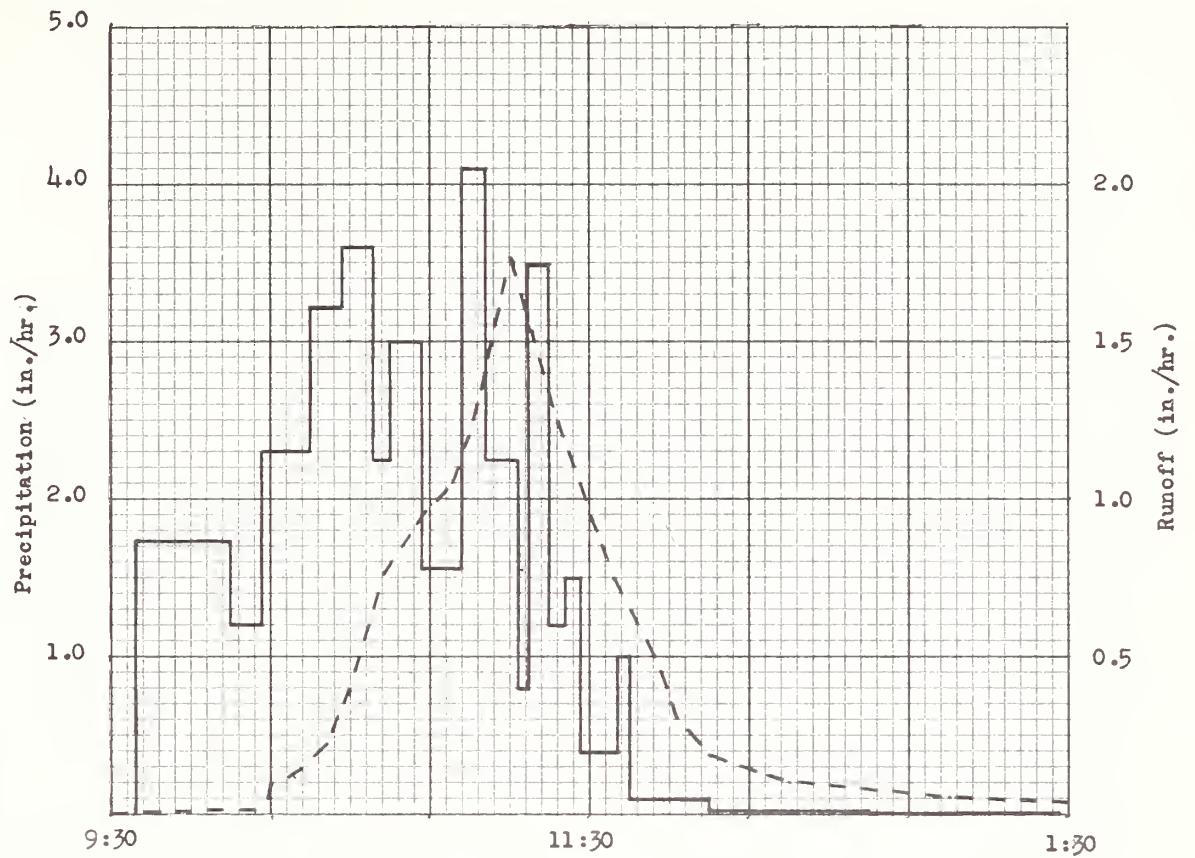


COSHOOTON, OHIO WATERSHED 196

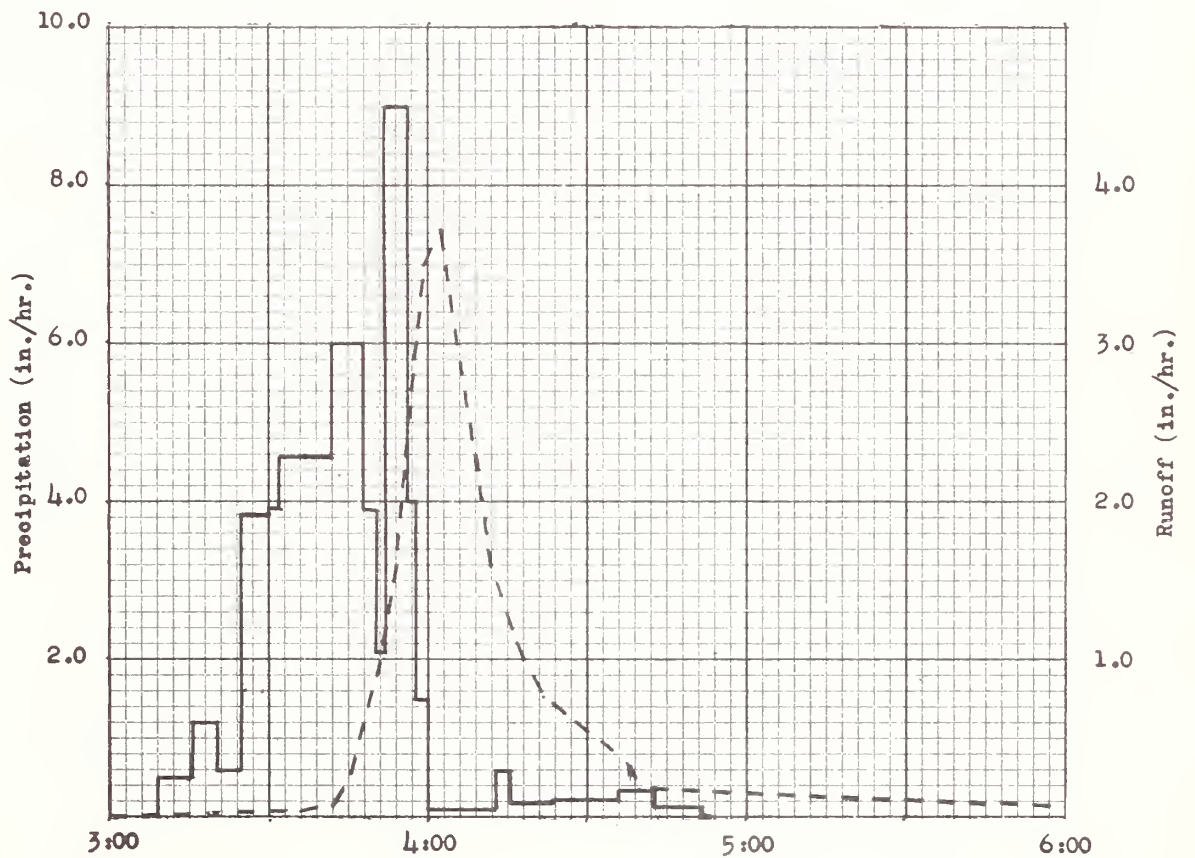


August 16, 1947 pm

COSHOCTON, OHIO WATERSHED 196



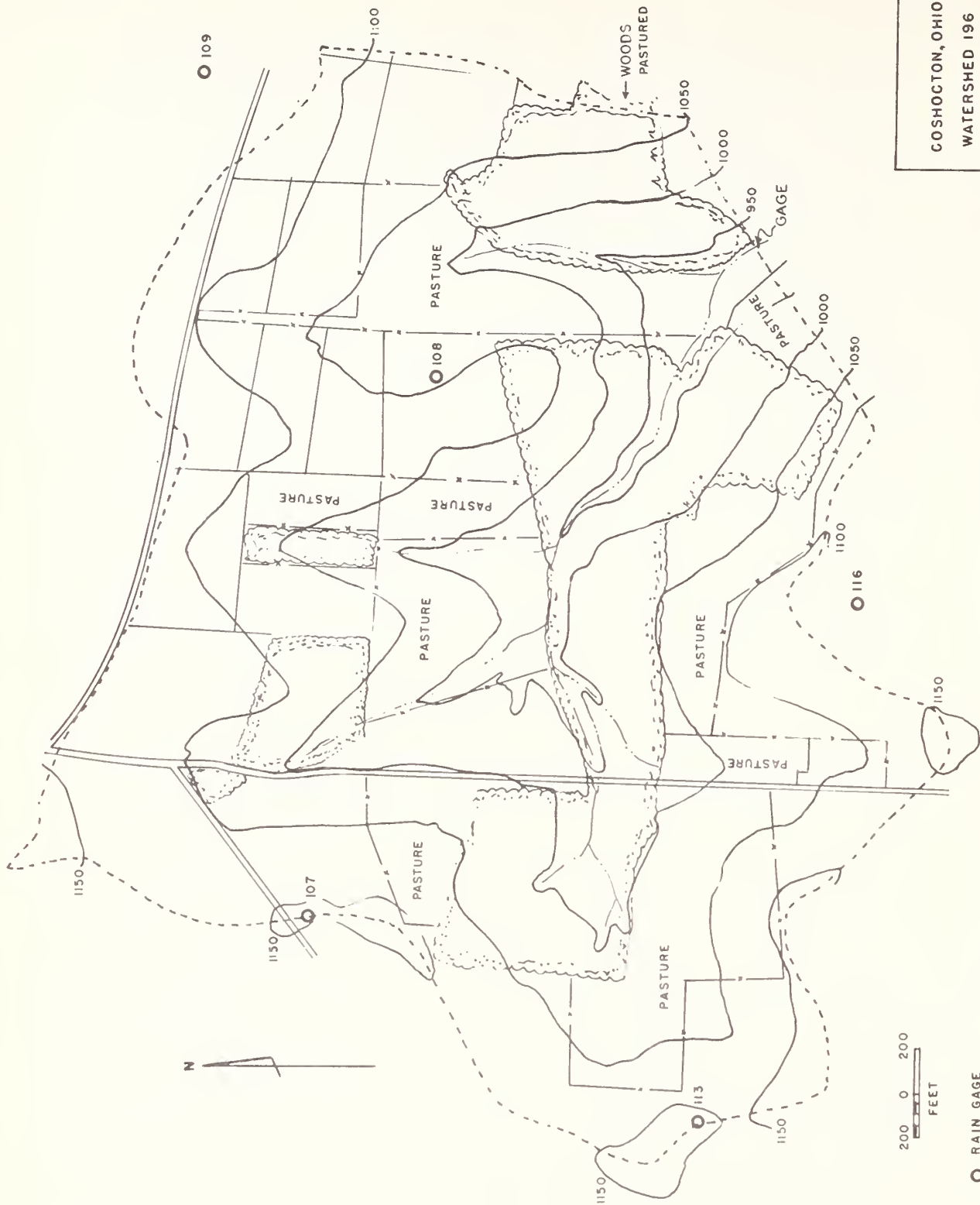
September 1, 1950 pm



June 12, 1957 pm

COSHOCTON, OHIO WATERSHED 196





| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | Watershed 97     |                      |                  | (26.36) Area - 4580 acres |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                    | Rainfall         |                      |                  | Runoff                    |                 |                  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time          | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 4, 1941                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                    |                  |                      |                  |                           |                 |                  |
| 5-3-6-41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                    | 0.020              | 6-4-41           | Raingage             | 27               | 6-4-41                    |                 |                  |
| 5-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .43                  | .009               | 9:44a            | 0                    | 0                | 9:40a                     | 0.0039          | 0                |
| 5-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .71                  | .011               | :52              | .15                  | .02              | 10:00                     | .0057           | .0016            |
| 5-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .12                  | .022               | 10:02            | 2.40                 | .43              | :16                       | .0124           | .0039            |
| 5-10-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                    | .031               | :14              | 1.20                 | .67              | :52                       | .0654           | .0257            |
| 5-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .08                  | .005               | :20              | .40                  | .71              | 11:04                     | .0756           | .0397            |
| 5-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .93                  | .023               | :28              | 1.68                 | .92              | :48                       | .186            | .1371            |
| 5-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .74                  | .200               | :44              | .38                  | 1.02             | 12:00n                    | .245            | .1805            |
| 5-18-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                    | .081               | 11:06            | .22                  | 1.10             | 12:12p                    | .348            | .2393            |
| 5-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.14                 | .653               | 12:42p           | .01                  | 1.12             | :16                       | .360            | .2629            |
| 5-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .06                  | .162               | 1:32             | .01                  | 1.13             | :36                       | .325            | .3776            |
| 5-24-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                    | .153               |                  |                      |                  | 1:00                      | .245            | .4908            |
| 5-29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .81                  | .032               |                  |                      |                  | :20                       | .124            | .5522            |
| 5-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                    | .060               |                  |                      |                  | 2:00                      | .0654           | .6143            |
| 5-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .27                  | .019               |                  |                      |                  | :08                       | .0563           | .6225            |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .10                  | .021               |                  |                      |                  | :28                       | .0437           | .6391            |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                    | .018               |                  |                      |                  | 3:00                      | .0381           | .6609            |
| 6-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .99                  | .047               |                  |                      |                  | 4:00                      | .0329           | .6973            |
| 6-4 to<br>9:44a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .12                  | .051               |                  |                      |                  |                           |                 |                  |
| Watershed Conditions: 6% of the area was in corn with most of it in conservation practice. An additional 1% of the area was in other row crops of either potatoes or soybeans. Corn plants were 6" high; 7% of the area was in small grain crops, 6% being in wheat. Wheat plants were 37" high. Oats and rye were the other small grain crops. 24% of the area was in meadow and 24% in pasture. Meadow grasses and legumes averaged 11" high, weeds 6" high. Pasture grasses averaged 10" high and weeds 12"; 26% of the area was in woodland, 8% in idle land which was mostly grassland, and 4% in miscellaneous cover. |                      |                    | 6-4-41           | Raingage             | 54               |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 9:51a            | 0                    | 0                |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 2:49p            |                      | 1.23             |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 6-4-41           | Raingage             | 56               |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 9:40a            | 0                    | 0                |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 2:38p            |                      | 1.21             |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 6-4-41           | Raingage             | 91               |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 9:55a            | 0                    | 0                |                           |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    | 1:30p            |                      | 1.41             |                           |                 |                  |
| Event of Sept. 23, 1945                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                           |                 |                  |
| 8-22-45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                    | T                  | 9-23-45          | Raingage             | 27               | 9-23-45                   |                 |                  |
| 8-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | T                    | .0001              | 6:30p            | 0                    | 0                | 6:30p                     | .0012           | 0                |
| 8-24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .05                  | .0001              | :40              | 2.10                 | .35              | :42                       | .0042           | .0004            |
| 8-25-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                    | .0003              | :44              | 2.70                 | .53              | :48                       | .0103           | .0012            |
| 9-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .07                  | T                  | :52              | 1.50                 | .73              | :54                       | .0138           | .0024            |
| 9-2-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | .0004              | 7:00             | 2.62                 | 1.08             | 7:00                      | .0232           | .0042            |
| 9-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .52                  | .0001              | :02              | 3.90                 | 1.21             | :12                       | .0662           | .0128            |
| 9-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .58                  | .0005              | :08              | .50                  | 1.26             | :30                       | .0922           | .0367            |
| 9-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.26                 | .0160              | :28              | .09                  | 1.29             | :36                       | .110            | .0466            |
| 9-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .20                  | .0093              | :32              | .60                  | 1.33             | :48                       | .224            | .0799            |
| Notes: To convert runoff in in/hr to cfs, multiply by 4619.15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  |                           |                 |                  |

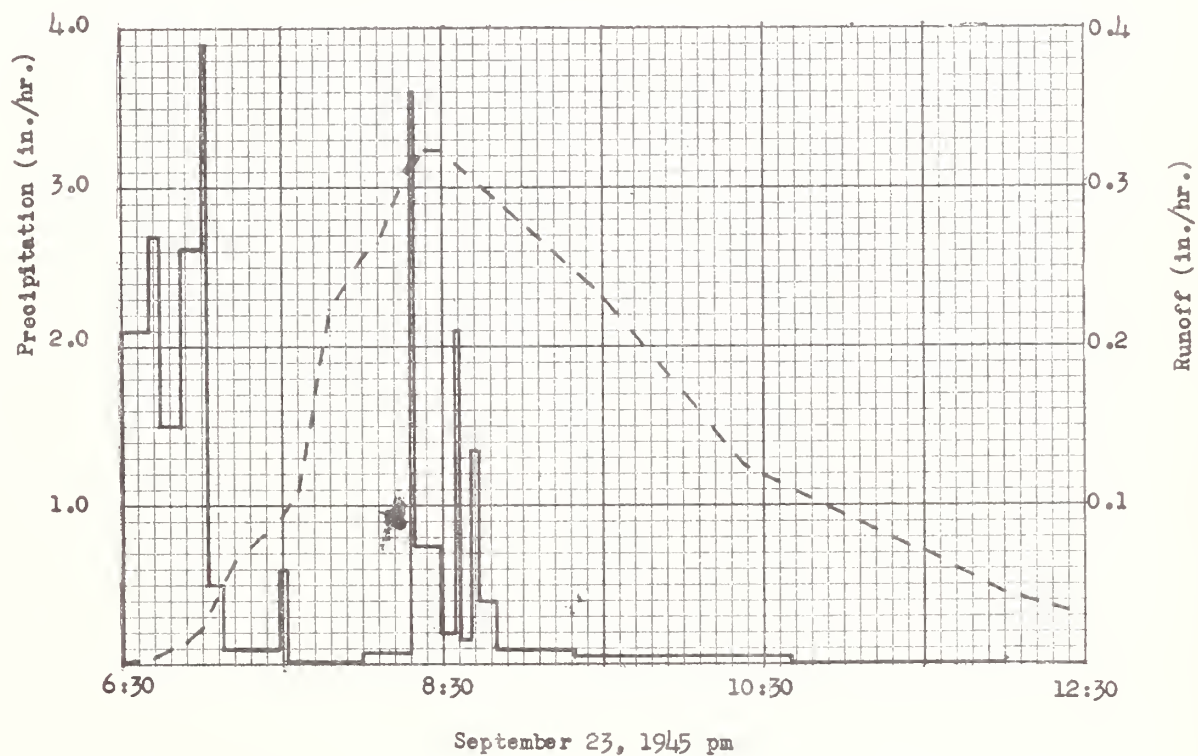
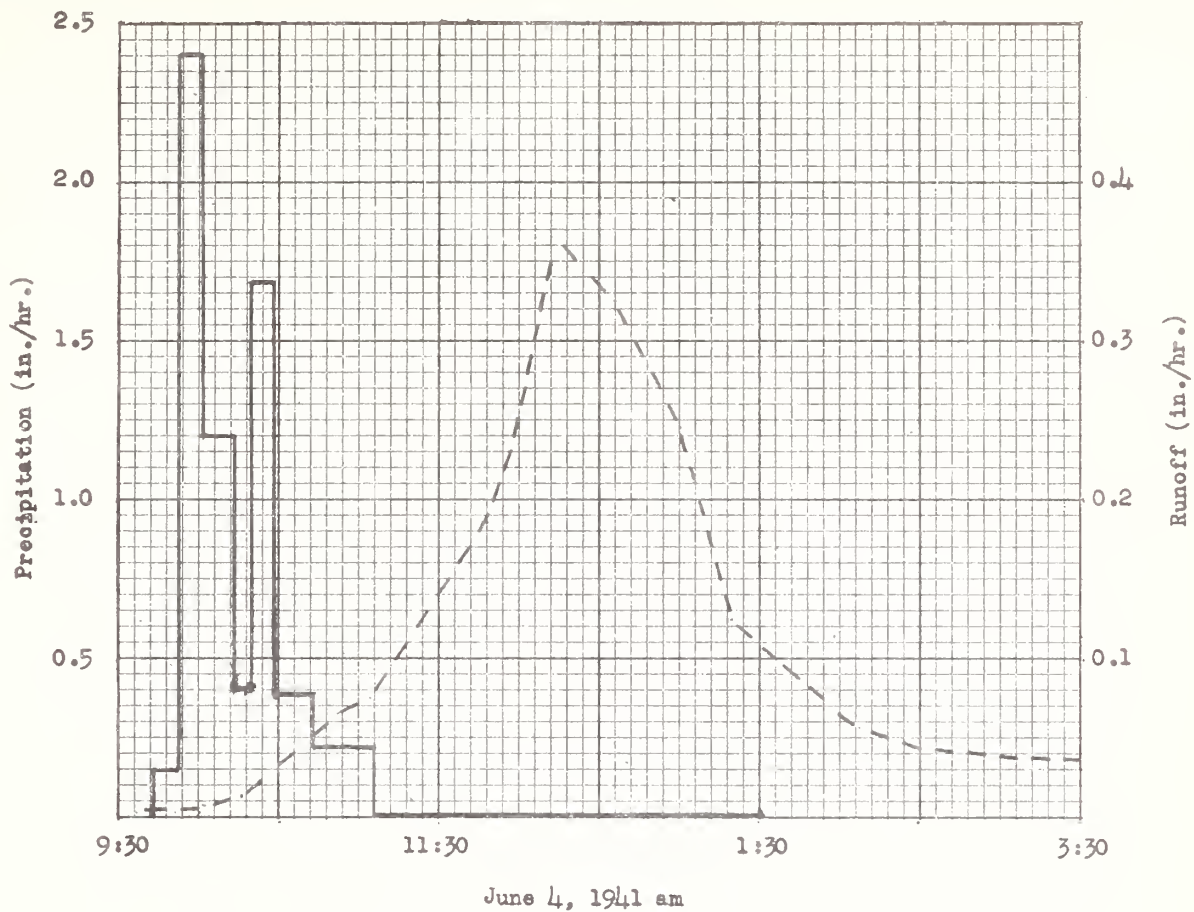
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                    | Rainfall               |                      |                  | Runoff            |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time       | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of Sept. 23, 1945 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    |                        |                      |                  |                   |                 |                  |
| 9-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                    | 0.0011             | 8:00                   | .02                  | 1.34             | 8:00              | 0.257           | 0.1291           |
| 9-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .38                  | .0005              | :18                    | .07                  | 1.36             | :06               | .266            | .1553            |
| 9-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .95                  | .0205              | :20                    | 3.60                 | 1.48             | :16               | .311            | .2029            |
| 9-15-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0095              | :28                    | .75                  | 1.58             | :24               | .323            | .2452            |
| 9-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .60                  | .0023              | :34                    | .20                  | 1.60             | :30               | .323            | .2775            |
| 9-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.07                 | .0776              | :36                    | 2.10                 | 1.67             | 9:30              | .232            | .5547            |
| 9-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                    | .0144              | :40                    | .15                  | 1.68             | 10:24             | .124            | .7140            |
| 9-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .65                  | .0349              | :44                    | 1.35                 | 1.77             | 11:30             | .0714           | .8194            |
| 9-21-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0261              | :50                    | .40                  | 1.81             | 12:00             | .0455           | .8481            |
| 9-23 to<br>6:30p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .48                  | .0059              | 9:20                   | .08                  | 1.85             | 9-24-45<br>12:20a | .0368           | .8618            |
| <p>Watershed Conditions: 7% of the area was in corn with most of it in conservation practice. Corn cutting was completed Sept. 17, which left the area in stubble. An additional 1% had been in potatoes and soybeans which had been harvested before Sept. 23. 8% of the area was in small grain crops of wheat, rye and oats. These had all been harvested and grasses averaged 6" high and weeds 10"; 6% of the area was in idle land which was mostly grassland. 28% of the area was in woodland and 4% in miscellaneous cover.</p> |                      |                    | 10:40                  | .04                  | 1.90             |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 12:00                  | .01                  | 1.91             |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 9-23-45                | Raingage             | 54               |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6:25p                  | 0                    | 0                |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 12:00m                 |                      | 1.99             |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 9-23-45                | Raingage             | 56               |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6:10p                  | 0                    | 0                |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 12:00m                 |                      | 2.27             |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 9-23-45                | Raingage             | 91               |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 6:30p                  | 0                    | 0                |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | 12:00m                 |                      | 1.86             |                   |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    | Event of July 11, 1946 |                      |                  |                   |                 |                  |
| 6-10-46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | 0.0101             | 7-11-46                | Raingage             | 27               | 7-11-46           |                 |                  |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .01                  | .0094              | 5:20p                  | 0                    | 0                | 5:00p             | .0002           | 0                |
| 6-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .77                  | .0105              | :26                    | 1.80                 | .18              | 6:30              | .0013           | .0008            |
| 6-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .69                  | .0716              | :28                    | 6.90                 | .41              | :36               | .0022           | .0010            |
| 6-14-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0325              | :32                    | 3.60                 | .65              | :54               | .0203           | .0040            |
| 6-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.87                 | .1490              | :36                    | 1.20                 | .73              | 7:06              | .0721           | .0128            |
| 6-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .64                  | .6671              | :44                    | 2.63                 | 1.08             | :22               | .0927           | .0351            |
| 6-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .32                  | .1255              | :52                    | 1.50                 | 1.28             | :30               | .105            | .0482            |
| 6-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .42                  | .2109              | :58                    | 0                    | 1.28             | :46               | .170            | .0852            |
| 6-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .93                  | .2588              | 6:04                   | .90                  | 1.37             | 8:02              | .198            | .1347            |
| 6-21-25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .3500              | :13                    | 0                    | 1.37             | :12               | .207            | .1684            |
| 6-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | T                    | .0250              | :16                    | 4.00                 | 1.57             | :32               | .211            | .2381            |
| 6-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .34                  | .0300              | :24                    | 2.92                 | 1.96             | :52               | .202            | .3070            |
| 6-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .58                  | .1233              | :38                    | 1.50                 | 2.31             | 9:02              | .189            | .3396            |
| 6-29-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .1094              | :44                    | .50                  | 2.36             | :28               | .128            | .4098            |

Notes: To convert runoff in in/hr to cfs, multiply by 4619.15.

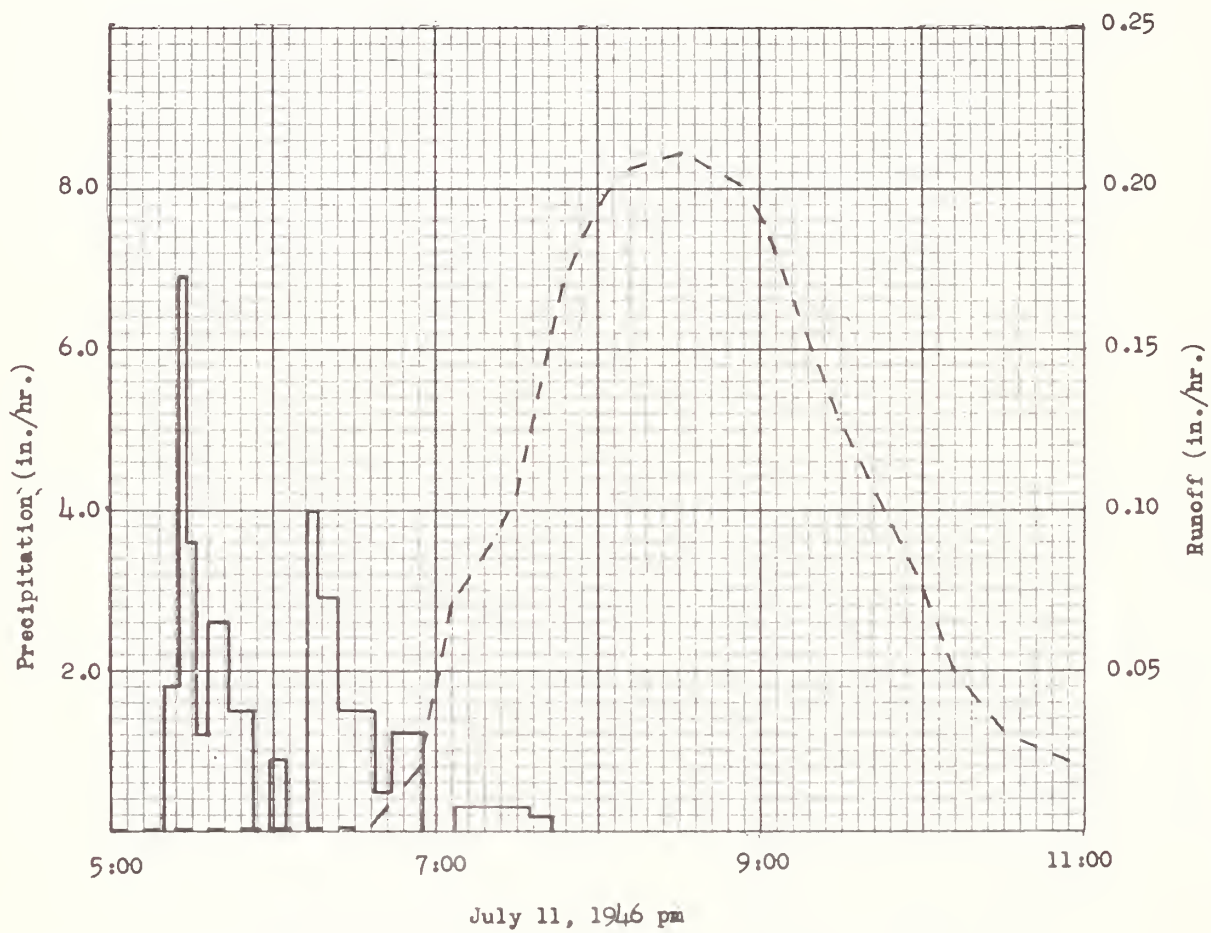
| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | Watershed 97     |                      | (26.36)          |                  | Area - 4580 acres |                  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-------------------|------------------|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    | Rainfall         |                      |                  | Runoff           |                   |                  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)   | Acc.<br>(inches) |  |
| Event of July 11, 1946 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    |                  |                      |                  |                  |                   |                  |  |
| 7-1-46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.02                 | 0.0249             | 6:56p            | 1.25                 | 2.61             | 10:00p           | 0.0762            | 0.4644           |  |
| 7-2-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .1049              | 7:08             | 0                    | 2.61             | :12              | .0496             | .4770            |  |
| 7-11 to 5:00p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                    | .0039              | :34              | .32                  | 2.75             | :32              | .0297             | .4894            |  |
| Watershed Conditions: 7% of area in corn, mostly conservation practice. Corn 36" and weeds 6" high. 1% of area in other row crops; 8% of area in small grain. Most of wheat and rye cut July 8-10 leaving stubble with new meadow seeding. Seedlings 2-3" high. Less than 1% of area in oats about 27" high. 23% of area in meadow. Hay cut July 1-8. Plants on July 11 averaged 2" for grass and legumes and 3" for weeds. 23% of area in pasture about 6" high. 6% of area in idle land, mostly grassland. 28% of area in woodland and 4% in miscellaneous cover. |                      |                    | :44              | .18                  | 2.78             | 11:02            | .0190             | .5012            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 7-11-46          | Raingage             | 39               |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 5:24p            | 0                    | 0                |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 7:54             |                      | 3.00             |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 7-11-46          | Raingage             | 54               |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 5:23p            | 0                    | 0                |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 8:23             |                      | 2.41             |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 7-11-46          | Raingage             | 56               |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 5:20p            | 0                    | 0                |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 8:20             |                      | 2.21             |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 7-11-46          | Raingage             | 91               |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 5:24p            | 0                    | 0                |                  |                   |                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 8:15             |                      | 2.77             |                  |                   |                  |  |
| Event of June 28, 1957                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                   |                  |  |
| 5-27-31-57                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | .0761              | 6-28-57          | Raingage             | 27               | 6-28-57          |                   |                  |  |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .18                  | .0115              | 1:03p            | 0                    | 0                | 1:00p            | .0021             | 0                |  |
| 6-2-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0                    | .0227              | :05              | 3.90                 | .13              | 2:44             | .0051             | .0044            |  |
| 6-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .04                  | .0063              | :10              | 3.00                 | .38              | 3:14             | .0097             | .0082            |  |
| 6-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .02                  | .0066              | 2:00             | .01                  | .39              | 4:00             | .0268             | .0224            |  |
| 6-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .96                  | .0242              | :08              | .98                  | .52              | 5:04             | .0329             | .0558            |  |
| 6-9-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .0202              | :10              | 6.00                 | .72              | :30              | .0342             | .0704            |  |
| 6-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .20                  | .0093              | :15              | .48                  | .76              | 6:00             | .0636             | .0932            |  |
| 6-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.54                 | .7594              | :40              | .02                  | .77              | :30              | .0851             | .1300            |  |
| 6-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .32                  | .1764              | :58              | .10                  | .80              | :44              | .115              | .1532            |  |
| 6-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .04                  | .0835              | 3:00             | 3.30                 | .91              | 7:00             | .314              | .2057            |  |
| 6-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .0475              | :40              | .02                  | .92              | :16              | .494              | .3176            |  |
| 6-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.02                 | .0335              | 4:10             | .08                  | .96              | :32              | .602              | .4660            |  |
| 6-17-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                    | .0447              | :30              | .12                  | 1.00             | :44              | .675              | .5939            |  |
| 6-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .02                  | .0155              | :33              | 2.00                 | 1.10             | :56              | .724              | .7330            |  |
| 6-20-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                    | .0345              | :50              | .25                  | 1.17             | 8:00             | .714              | .7809            |  |
| 6-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .10                  | .0101              | 5:00             | .18                  | 1.20             | :30              | .579              | 1.1111           |  |
| 6-24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.24                 | .2434              | :20              | .36                  | 1.32             | :44              | .494              | 1.2374           |  |
| 6-25-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                    | .1738              | :30              | .72                  | 1.44             | 9:00             | .407              | 1.3565           |  |
| 6-28 to 1:03p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | .26                  | 0.190              | :50              | .51                  | 1.61             | :14              | .342              | 1.4443           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | 6:02             | .55                  | 1.72             | 9:30             | .281              | 1.5278           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | :10              | .82                  | 1.83             | 10:00            | .171              | 1.6417           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | :17              | 1.11                 | 1.96             | :16              | .124              | 1.6798           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | :25              | .45                  | 2.02             | :32              | .105              | 1.7100           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    | :40              | 1.20                 | 2.32             | 11:00            | .0862             | 1.7544           |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 4619.15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  |                  |                   |                  |  |



| Coshocton, Ohio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | Watershed 97     |                      | (26.36)          |                  | Area - 4580 acres |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------|------------------|----------------------|------------------|------------------|-------------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |                    | Rainfall         |                      |                  | Runoff           |                   |                  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Rainfall<br>(inches)                                           | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)   | Acc.<br>(inches) |
| Event of June 28, 1957 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |                    |                  |                      |                  |                  |                   |                  |
| Watershed Conditions: 8% of the area was in corn with most of it in conservation practice. Corn plants were 34-38" high and weeds 24". An additional 1% of the area was in other row crops of potatoes and soybeans. 8% of the area was in wheat and an additional 1% in other small grain crops of rye and oats. Wheat plants were 36" high and weeds 4" high; 21% of the area was in meadow. Grasses and legumes averaged 6" high and weeds 5" high; 22% of the area was in pasture and 5% in idle land. Pasture grasses and legumes averaged 5" high and weeds 6" high; 30% of the area was in woodland and 4% in miscellaneous cover. |                                                                |                    | 6:45             | 2.16                 | 2.50             | 12:00m           | 0.0530            | 1.8254           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :57              | .35e                 | 2.57e            | 6-29-57          |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 7:01             | 3.15e                | 2.78e            | 12:16a           | .0437             | 1.8384           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :05              | .60e                 | 2.82e            | 1:00             | .0329             | 1.8655           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :10              | .24e                 | 2.84e            | :30              | .0303             | 1.8813           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :18              | .90e                 | 2.96e            | 2:00             | .0281             | 1.8959           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :50              | .24e                 | 3.09e            | 3:30             | .0227             | 1.9334           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 8:05             | .12e                 | 3.12e            |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :20              | .04e                 | 3.13e            |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | :50              | .02e                 | 3.14             |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 6-28-57          | Raingage             | 39               |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 12:50p           | 0                    | 0                |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 8:50             |                      | 2.85             |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 6-28-57          | Raingage             | 56               |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 1:19p            | 0                    | 0                |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 8:35             |                      | 2.69             |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 6-28-57          | Raingage             | 91               |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 12:50p           | 0                    | 0                |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |                    | 8:34             |                      | 2.96             |                  |                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Notes: To convert runoff in in/hr to cfs, multiply by 4619.15. |                    |                  |                      |                  |                  |                   |                  |

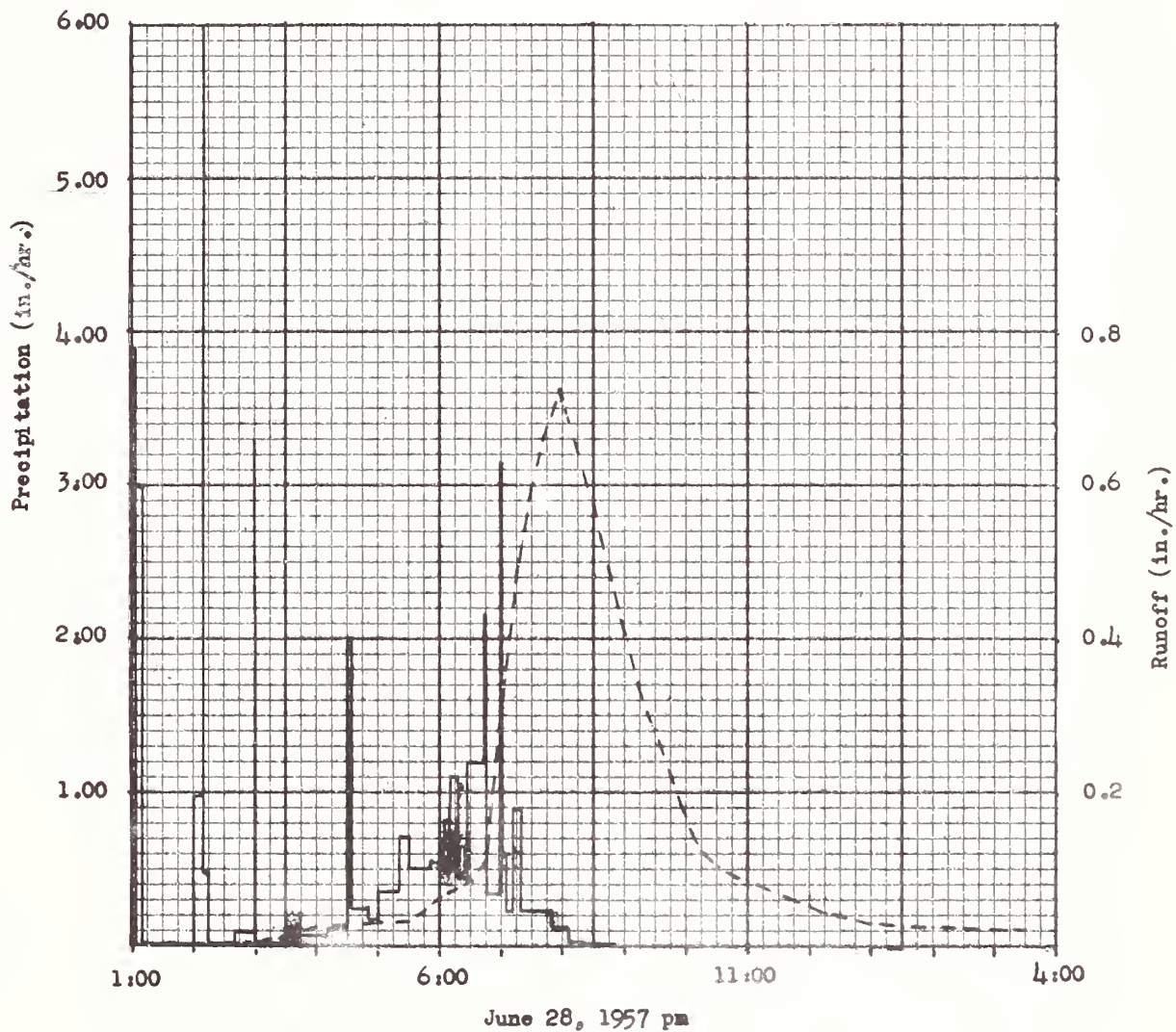


COSHOCTON, OHIO WATERSHED 97



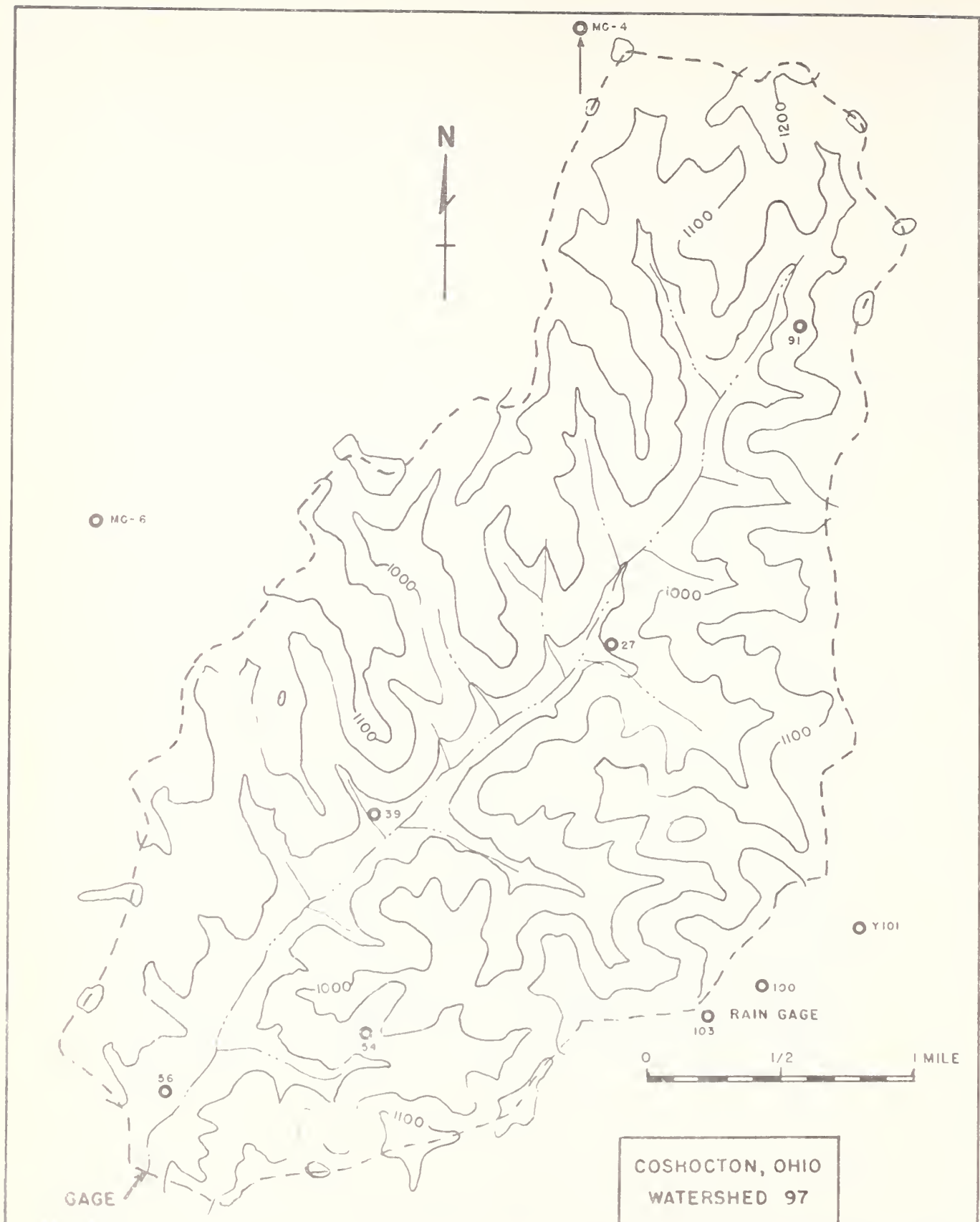
COSHOCTON, OHIO WATERSHED 97





COSHOCTON, OHIO WATERSHED 97



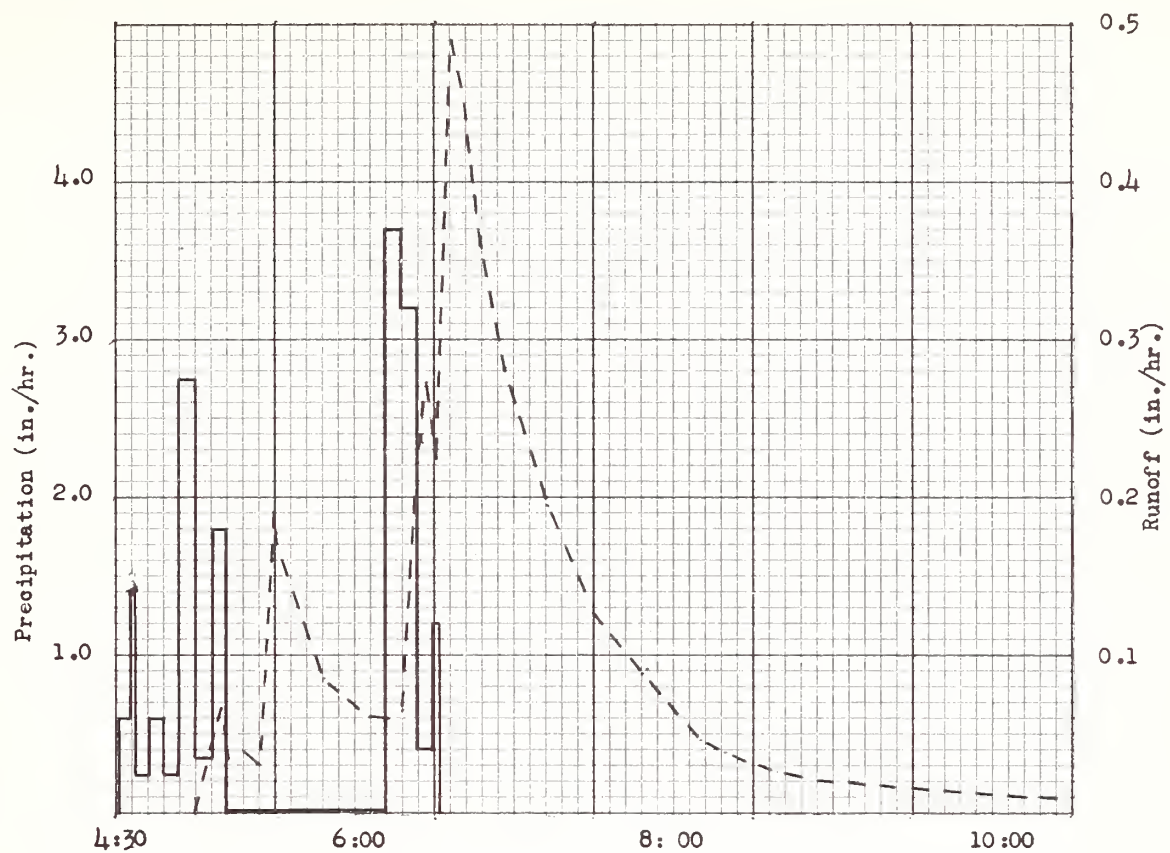


Sheet 8 of 8

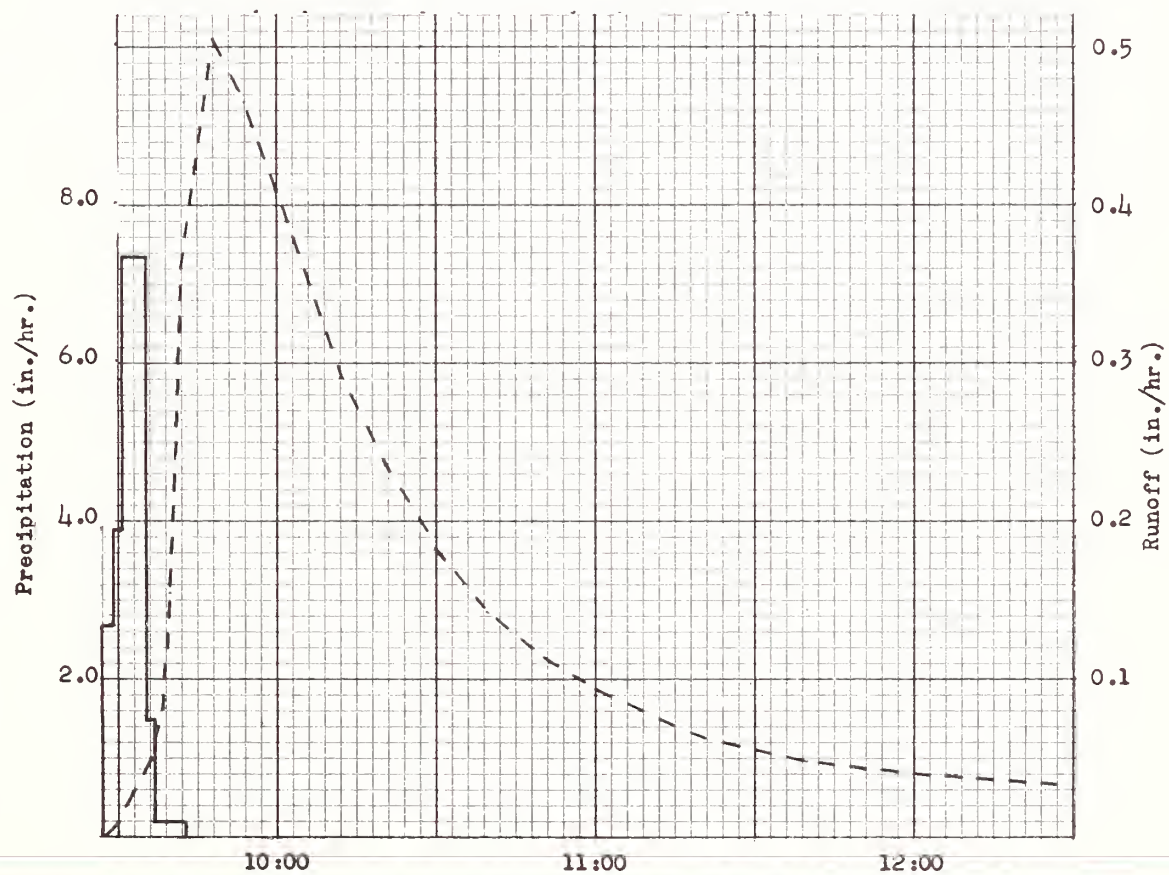
26.36-8

| Hamilton, Ohio                                                                                                                                                                                                                            |                      |                    | Watershed W-1    |                      |                  | (27.1)           |                 |                  | Area - 187 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                     |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of July 4, 1939                                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 6-4-6-39                                                                                                                                                                                                                                  | 0                    | 0                  | 7-4-39           | Raingage             | R-4              | 7-4-39           |                 |                  |                  |  |  |
| 6-7                                                                                                                                                                                                                                       | .05                  | 0                  | 4:32p            | 0                    | 0                | 5:00p            | .0021           | 0                |                  |  |  |
| 6-8                                                                                                                                                                                                                                       | .79                  | .004               | :35              | .60                  | .03              | :08              | .0011           | .0004            |                  |  |  |
| 6-9                                                                                                                                                                                                                                       | 0                    | 0                  | :38              | 1.40                 | .10              | :10              | .0662           | .0017            |                  |  |  |
| 6-10                                                                                                                                                                                                                                      | .78                  | .029               | :43              | .24                  | .12              | :12              | .0350           | .0033            |                  |  |  |
| 6-11                                                                                                                                                                                                                                      | 0                    | .009               | :48              | .60                  | .17              | :18              | .0393           | .0067            |                  |  |  |
| 6-12                                                                                                                                                                                                                                      | 0                    | 0                  | :53              | .24                  | .19              | :24              | .0304           | .0100            |                  |  |  |
| 6-13                                                                                                                                                                                                                                      | 1.11                 | .149               | 5:00             | 2.74                 | .51              | :29              | .191            | .0192            |                  |  |  |
| 6-14                                                                                                                                                                                                                                      | 0                    | .010               | :07              | .34                  | .55              | :31              | .171            | .0253            |                  |  |  |
| 6-15                                                                                                                                                                                                                                      | 0                    | .002               | :11              | 1.80                 | .67              | :49              | .0853           | .0641            |                  |  |  |
| 6-16                                                                                                                                                                                                                                      | 0                    | 0                  | 6:11             | .01                  | .68              | 6:05             | .0611           | .0832            |                  |  |  |
| 6-17                                                                                                                                                                                                                                      | .40                  | 0                  | :17              | 3.70                 | 1.05             | :13              | .0599           | .0912            |                  |  |  |
| 6-18                                                                                                                                                                                                                                      | 1.60                 | .403               | :23              | 3.20                 | 1.37             | :18              | .0645           | .0964            |                  |  |  |
| 6-19                                                                                                                                                                                                                                      | .11                  | .050               | :29              | .40                  | 1.41             | :23              | .221            | .1083            |                  |  |  |
| 6-20                                                                                                                                                                                                                                      | .29                  | .048               | :32              | 1.20                 | 1.47             | :27              | .272            | .1250            |                  |  |  |
| 6-21                                                                                                                                                                                                                                      | .19                  | .042               |                  |                      |                  | :31              | .224            | .1415            |                  |  |  |
| 6-22                                                                                                                                                                                                                                      | .05                  | .024               |                  |                      |                  | :37              | .490            | .1773            |                  |  |  |
| 6-23                                                                                                                                                                                                                                      | 0                    | .010               |                  |                      |                  | :42              | .445            | .2166            |                  |  |  |
| 6-24                                                                                                                                                                                                                                      | 0                    | .005               |                  |                      |                  | :48              | .358            | .2568            |                  |  |  |
| 6-25                                                                                                                                                                                                                                      | 0                    | .002               |                  |                      |                  | :57              | .282            | .3047            |                  |  |  |
| 6-26                                                                                                                                                                                                                                      | 0                    | .002               |                  |                      |                  | 7:13             | .196            | .3682            |                  |  |  |
| 6-27                                                                                                                                                                                                                                      | .08                  | 0                  |                  |                      |                  | :31              | .127            | .4166            |                  |  |  |
| 6-28                                                                                                                                                                                                                                      | .48                  | .002               |                  |                      |                  | :48              | .0882           | .4471            |                  |  |  |
| 6-29                                                                                                                                                                                                                                      | .66                  | .037               |                  |                      |                  | 8:10             | .0467           | .4718            |                  |  |  |
| 6-30                                                                                                                                                                                                                                      | 0                    | .013               |                  |                      |                  | :20              | .0392           | .4789            |                  |  |  |
| 7-1                                                                                                                                                                                                                                       | 0                    | .005               |                  |                      |                  | :30              | .0316           | .4848            |                  |  |  |
| 7-2-3                                                                                                                                                                                                                                     | 0                    | 0                  |                  |                      |                  | :39              | .0266           | .4892            |                  |  |  |
|                                                                                                                                                                                                                                           |                      |                    |                  |                      |                  | :55              | .0218           | .4957            |                  |  |  |
|                                                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 9:42             | .0133           | .5091            |                  |  |  |
|                                                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 10:10            | .0111           | .5148            |                  |  |  |
|                                                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 11:00            | .0081           | .5228            |                  |  |  |
| Watershed Conditions: 22%<br>of area in corn, waist high;<br>15% of area was in good clover<br>seeding after wheat and oat<br>harvest; 41% of area in good<br>pasture and meadow; and 22%<br>of area in woods and mis-<br>cellaneous use. |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| Event of May 17, 1943                                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 4-17                                                                                                                                                                                                                                      | 0                    | 0.015              | 5-17-43          | Raingage             | R-4              | 5-17-43          |                 |                  |                  |  |  |
| 4-18                                                                                                                                                                                                                                      | 0                    | .014               | 9:27p            | 0                    | 0                | 9:30p            | .0091           | 0                |                  |  |  |
| 4-19                                                                                                                                                                                                                                      | .17                  | .013               | :29              | 2.70                 | .09              | :36              | .0505           | .0020            |                  |  |  |
| 4-20                                                                                                                                                                                                                                      | .10                  | .013               | :31              | 3.90                 | .13              | :38              | .0818           | .0042            |                  |  |  |
| 4-21                                                                                                                                                                                                                                      | 0                    | .013               | :35              | 7.35                 | .62              | :40              | .155            | .0081            |                  |  |  |
| 4-22                                                                                                                                                                                                                                      | 0                    | .013               | :37              | 1.50                 | .67              | :42              | .360            | .0167            |                  |  |  |
| 4-23                                                                                                                                                                                                                                      | .09                  | .013               | :43              | .20                  | .69              | :48              | .506            | .0609            |                  |  |  |
| 4-24                                                                                                                                                                                                                                      | 0                    | .013               |                  |                      |                  | :54              | .466            | .1093            |                  |  |  |
| 4-25                                                                                                                                                                                                                                      | 0                    | .013               |                  |                      |                  | 10:00            | .408            | .1329            |                  |  |  |
| 4-26                                                                                                                                                                                                                                      | 0                    | .012               |                  |                      |                  | :12              | .292            | .2224            |                  |  |  |
| 4-27                                                                                                                                                                                                                                      | .27                  | .011               |                  |                      |                  | :20              | .237            | .2578            |                  |  |  |
| 4-28                                                                                                                                                                                                                                      | 0                    | .010               |                  |                      |                  | :30              | .183            | .2928            |                  |  |  |
| 4-29                                                                                                                                                                                                                                      | 0                    | .009               |                  |                      |                  | :40              | .143            | .3199            |                  |  |  |
| 4-30                                                                                                                                                                                                                                      | .17                  | .008               |                  |                      |                  | :50              | .114            | .3413            |                  |  |  |
| 5-1                                                                                                                                                                                                                                       | 0                    | .007               |                  |                      |                  | 11:00            | .0944           | .3586            |                  |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 188.324                                                                                                                                                                             |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |

| Hamilton, Ohio                                                                                                                                                                            |                      |                    | Watershed W-1    |                      |                  | (27.1)           |                 |                  | Area - 187 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                     |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| 5-2                                                                                                                                                                                       | 0.07                 | 0.006              |                  |                      |                  | 11:20            | 0.0633          | 0.3849           |                  |  |  |
| 5-3                                                                                                                                                                                       | 0                    | .005               |                  |                      |                  | :40              | .0489           | .4036            |                  |  |  |
| 5-4                                                                                                                                                                                       | 0                    | .005               |                  |                      |                  | 12:00M           | .0407           | .4185            |                  |  |  |
| 5-5                                                                                                                                                                                       | 0                    | .005               |                  |                      |                  | 1:00a            | .0265           | .4521            |                  |  |  |
| 5-6                                                                                                                                                                                       | 0                    | .005               |                  |                      |                  | 2:00             | .0206           | .4756            |                  |  |  |
| 5-7                                                                                                                                                                                       | .46                  | .005               |                  |                      |                  | 3:00             | .0175           | .4946            |                  |  |  |
| 5-8                                                                                                                                                                                       | .35                  | .010               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-9                                                                                                                                                                                       | .30                  | .014               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-10                                                                                                                                                                                      | .90                  | .210               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-11                                                                                                                                                                                      | .28                  | .172               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-12                                                                                                                                                                                      | 0                    | .100               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-13                                                                                                                                                                                      | .15                  | .065               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-14                                                                                                                                                                                      | 0                    | .048               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-15                                                                                                                                                                                      | 1.05                 | .419               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-16                                                                                                                                                                                      | .67                  | .568               |                  |                      |                  |                  |                 |                  |                  |  |  |
| 5-17                                                                                                                                                                                      | .32                  | .104               |                  |                      |                  |                  |                 |                  |                  |  |  |
| Watershed Conditions: No data available on crop conditions. Approximately 25% of watershed in row crops, 53% in grassland or mature small grain, and 22% in woods and miscellaneous use.  |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| Event of July 7, 1943                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 6-6-43                                                                                                                                                                                    | 1.86                 | 0.342              | 7-7-43           | Raingage             | R-4              | 7-7-39           |                 |                  |                  |  |  |
| 6-7                                                                                                                                                                                       | .04                  | .053               | 12:52p           | 0                    | 0                | 1:00p            | 0               | 0                |                  |  |  |
| 6-8                                                                                                                                                                                       |                      | .021               | :56              | .45                  | .03              | :04              | .0080           | .0003            |                  |  |  |
| 6-9                                                                                                                                                                                       |                      | .001               | 1:02             | 1.00                 | .13              | :09              | .0207           | .0012            |                  |  |  |
| 6-10                                                                                                                                                                                      | .51                  | .020               | :05              | 6.00                 | .43              | :12              | .0386           | .0027            |                  |  |  |
| 6-11                                                                                                                                                                                      |                      | .013               | :08              | 4.00                 | .63              | :15              | .0684           | .0053            |                  |  |  |
| 6-12                                                                                                                                                                                      |                      | .006               | :10              | 7.50                 | .88              | :18              | .302            | .0139            |                  |  |  |
| 6-13                                                                                                                                                                                      |                      | .002               | :12              | 6.00                 | 1.08             | :21              | .464            | .0331            |                  |  |  |
| 6-14                                                                                                                                                                                      |                      | .001               | :19              | 1.89                 | 1.30             | :23              | .541            | .0498            |                  |  |  |
| 6-15                                                                                                                                                                                      | .19                  | 0                  | :27              | .45                  | 1.36             | :26              | .497            | .0761            |                  |  |  |
| 6-16                                                                                                                                                                                      | .22                  | 0                  | :40              | .09                  | 1.38             | :30              | .432            | .1068            |                  |  |  |
| 6-17-20                                                                                                                                                                                   | 0                    | 0                  |                  |                      |                  | :36              | .316            | .1443            |                  |  |  |
| 6-21                                                                                                                                                                                      | .06                  | 0                  |                  |                      |                  | :42              | .228            | .1713            |                  |  |  |
| 6-22-27                                                                                                                                                                                   | 0                    | 0                  |                  |                      |                  | :48              | .174            | .1914            |                  |  |  |
| 6-28                                                                                                                                                                                      | .17                  | 0                  |                  |                      |                  | 2:00             | .120            | .2212            |                  |  |  |
| 6-29-30                                                                                                                                                                                   | 0                    | 0                  |                  |                      |                  | :12              | .0750           | .2405            |                  |  |  |
| 7-1-3                                                                                                                                                                                     | 0                    | 0                  |                  |                      |                  | :30              | .0340           | .2558            |                  |  |  |
| 7-4                                                                                                                                                                                       | .10                  | 0                  |                  |                      |                  | 3:00             | .0140           | .2669            |                  |  |  |
| 7-5                                                                                                                                                                                       | .06                  | 0                  |                  |                      |                  | :20              | .0095           | .2708            |                  |  |  |
| 7-6                                                                                                                                                                                       | 1.40                 | .034               |                  |                      |                  | :40              | .0065           | .2735            |                  |  |  |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | 4:00             | .0051           | .2754            |                  |  |  |
| Watershed Conditions: No data available on crop conditions. Approximately 25% of watersheds in row crops, 53% in grassland or mature small grain, and 22% in woods and miscellaneous use. |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 188.324                                                                                                                             |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |



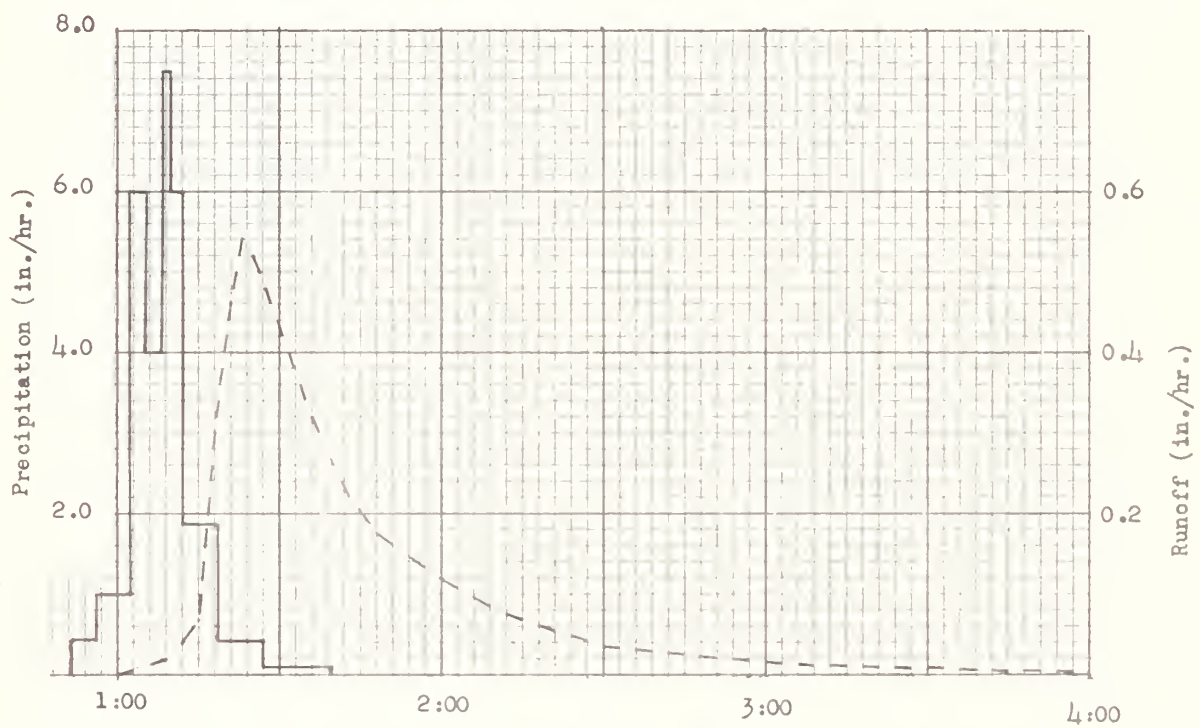
July 4, 1939 pm



May 17, 1943 pm

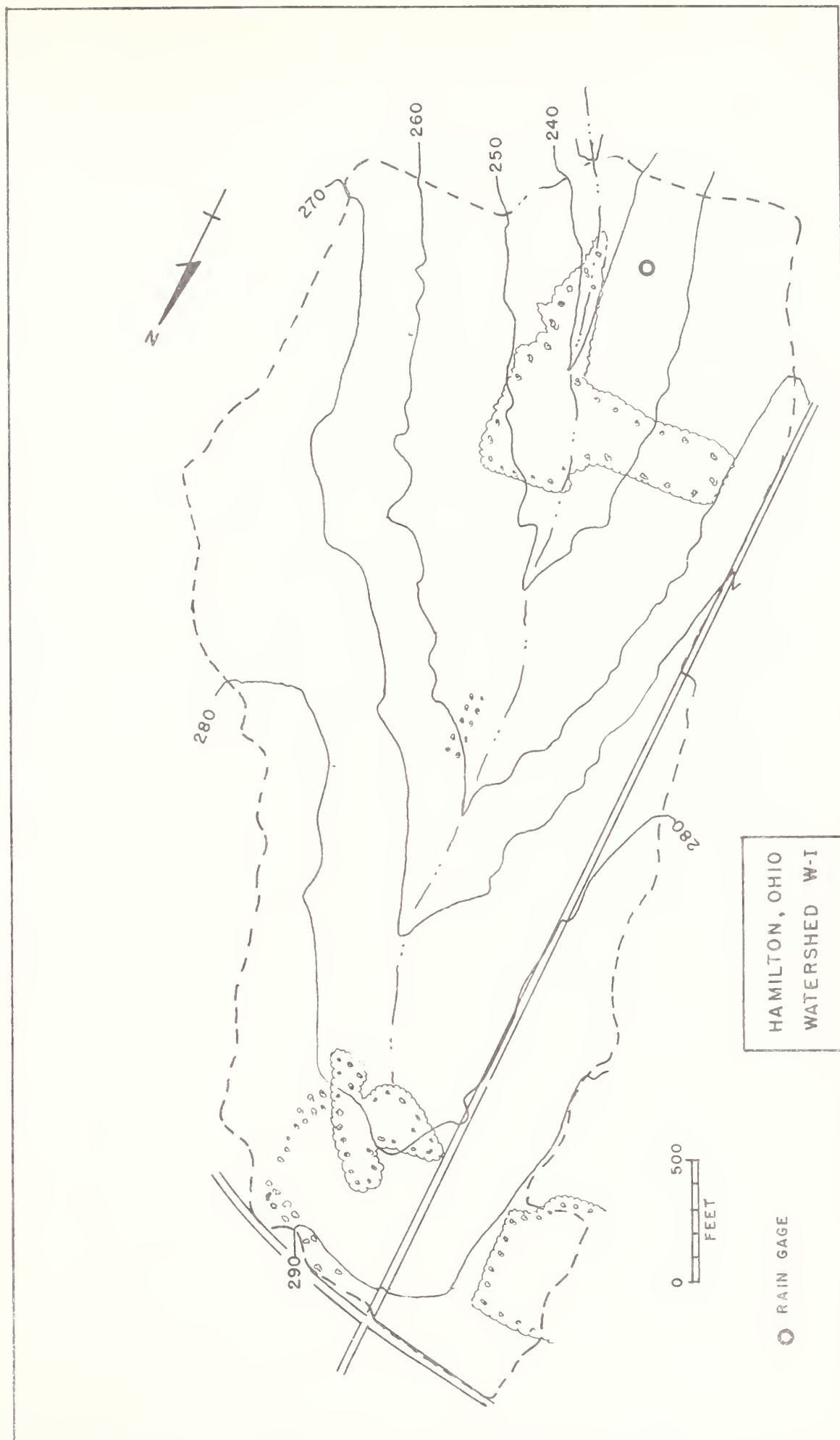
HAMILTON, OHIO WATERSHED W-1





July 7, 1943 pm

HAMILTON, OHIO WATERSHED W-1





| Colby, Wisconsin                                                                                                                                                                           |                   |                 | Watershed W-1 (29.1)   |                   |               | Area - 345 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|------------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                      |                   |                 | Rainfall               |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                                       | Rainfall (inches) | Runoff (inches) | Date and time          | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| 6-28-49                                                                                                                                                                                    | 0                 | .0130           | Event of July 28, 1949 |                   |               | 7-28-49          |              |               |
| 6-29                                                                                                                                                                                       | 0                 | .0001           | 7-28-49                | Raingage          | R-3           | 7-28-49          |              |               |
| 6-30                                                                                                                                                                                       | .02               | 0               | 7:35p                  | 0                 | 0             | 7:35p            | 0            | 0             |
| 7-1                                                                                                                                                                                        | 1.41              | .1180           | :39                    | 2.25              | .15           | 8:00             | .0039        | .0005         |
| 7-2                                                                                                                                                                                        | 0                 | .0007           | :42                    | 1.20              | .21           | :05              | .0087        | .0010         |
|                                                                                                                                                                                            |                   |                 | :56                    | 2.32              | .75           | :11              | .0301        | .0027         |
| 7-4                                                                                                                                                                                        | .79               | .0226           | :59                    | 1.00              | .80           | :14              | .0526        | .0048         |
| 7-5                                                                                                                                                                                        | .01               | .0024           | 8:02                   | 4.00              | 1.00          | :17              | .0580        | .0076         |
| 7-6                                                                                                                                                                                        | 0                 | .0003           | :08                    | 2.60              | 1.26          | :23              | .0569        | .0134         |
| 7-12                                                                                                                                                                                       | .17               | 0               | :30                    | .38               | 1.40          | :29              | .0469        | .0185         |
| 7-13                                                                                                                                                                                       | .13               | 0               |                        |                   |               | :45              | .0327        | .0286         |
| 7-18                                                                                                                                                                                       | .05               | 0               |                        | Total Rainfall    |               | :50              | .0325        | .0313         |
| 7-22                                                                                                                                                                                       | .10               | 0               |                        | R-1               | 1.40          | 9:00             | .0359        | .0369         |
| 7-24                                                                                                                                                                                       | .87               | .0059           |                        | R-2               | 1.39          | :10              | .0598        | .0445         |
| 7-26                                                                                                                                                                                       | .05               | 0               |                        | Weighted Average  | 1.40          | :20              | .0764        | .0560         |
| 7-27                                                                                                                                                                                       | 1.55              | .0357           |                        |                   |               | :25              | .0808        | .0626         |
| 7-28                                                                                                                                                                                       | 0                 | .0091           |                        |                   |               | 9:30             | .0794        | .0693         |
| <u>Watershed Conditions:</u> 21.7% of area was in permanent pasture, 11% in ungrazed woods, 1.6% in roads, 1.2% in farmsteads, and 64.5% in 4 yr. rotation of corn, small grain, hay, hay. |                   |                 |                        |                   |               | :45              | .0716        | .0884         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 10:00            | .0635        | .1053         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | :30              | .0505        | .1335         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 11:00            | .0432        | .1568         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 12:00            | .0307        | .1937         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 7-29-49          |              |               |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 1:00a            | .0208        | .2191         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 2:00             | .0138        | .2364         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 4:00             | .0073        | .2571         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 6:00             | .0038        | .2680         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 8:00             | .0021        | .2740         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 10:00            | .0013        | .2774         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 12:00            | .0009        | .2796         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 4:00p            | .0003        | .2820         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 7:00             | .0002        | .2827         |
|                                                                                                                                                                                            |                   |                 |                        |                   |               | 12:00            | .0001        | .2834         |
| Notes: To convert runoff in in/hr to cfs, multiply by 347.864.                                                                                                                             |                   |                 |                        |                   |               |                  |              |               |

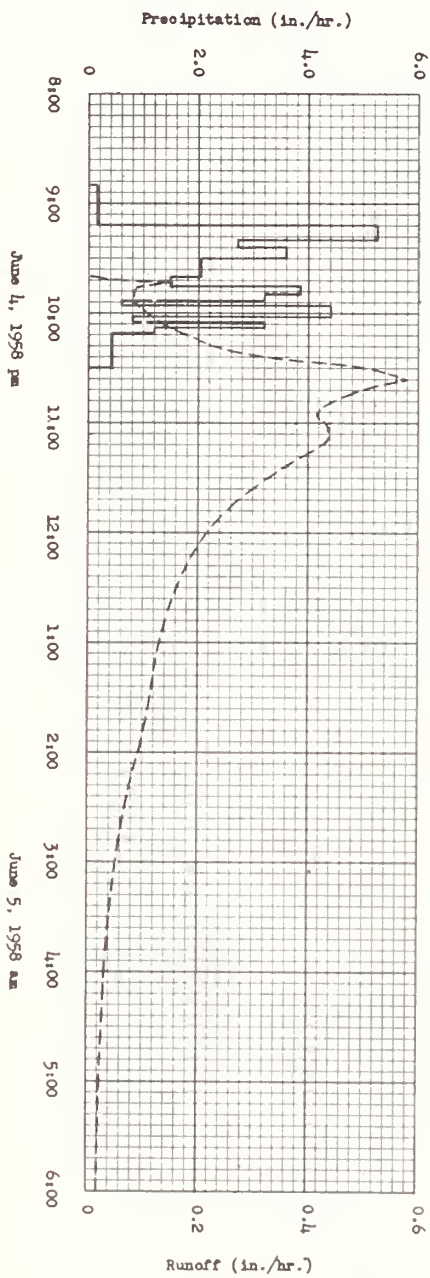
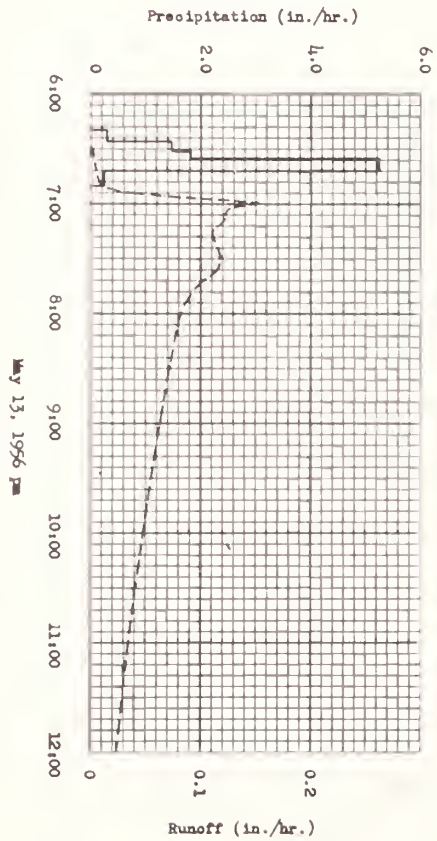
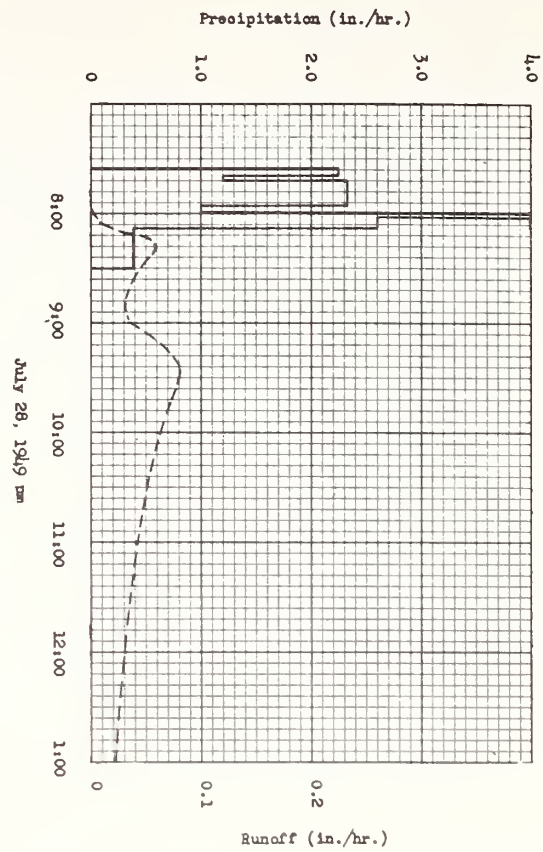


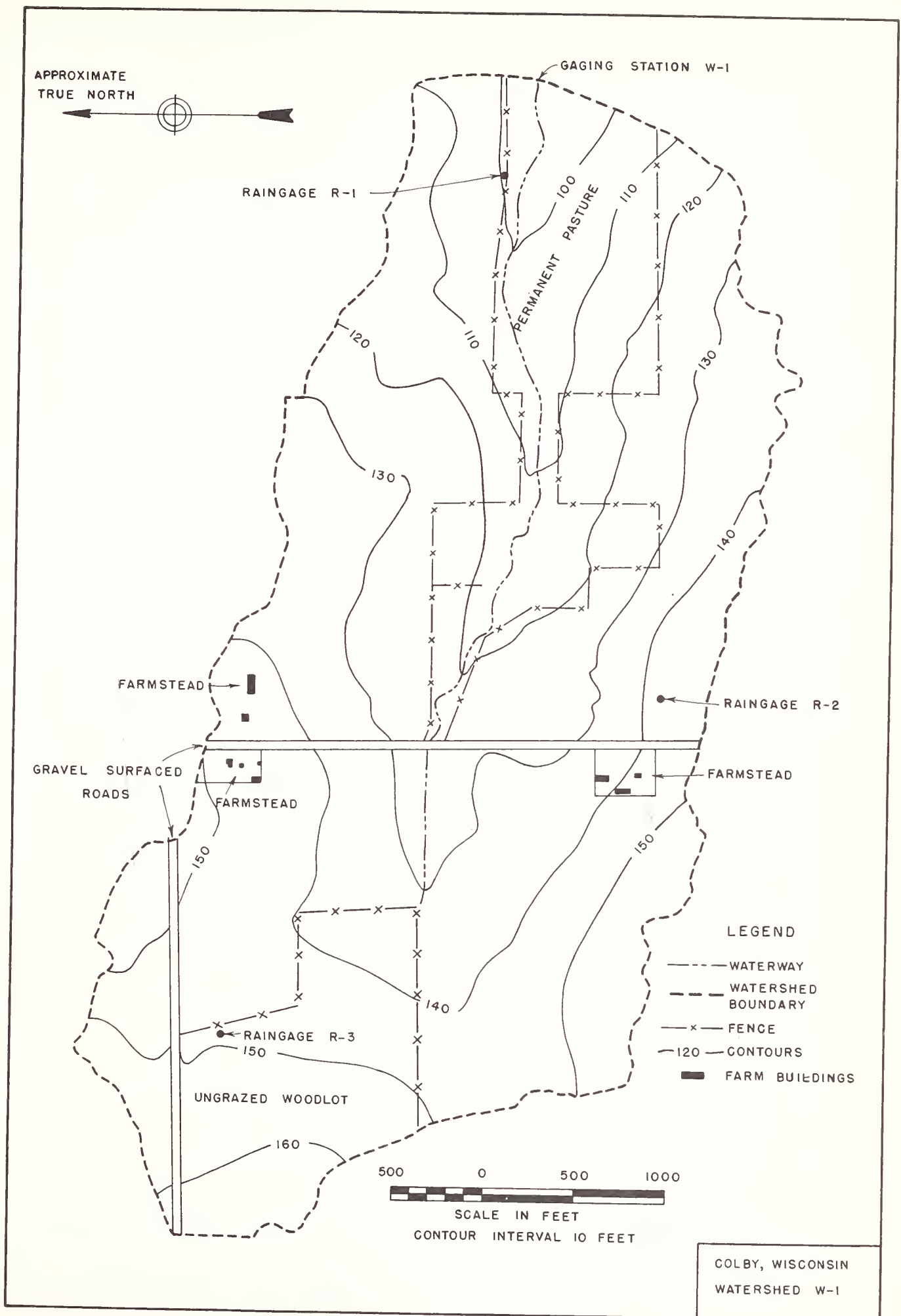
| Colby, Wisconsin                                                                                                                                                                                          |                      |                    | Watershed W-1    |                      |                  | (29.1) Area - 345 acres |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|-------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                     |                      |                    | Rainfall         |                      |                  | Runoff                  |                 |                  |
| Date                                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time        | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 13, 1956                                                                                                                                                                                     |                      |                    |                  |                      |                  |                         |                 |                  |
| 4-15-56                                                                                                                                                                                                   | .01                  | 0                  | 5-13-56          | Raingage             | R-1              | 5-13-56                 |                 |                  |
| 4-26                                                                                                                                                                                                      | .04s                 | 0                  | 6:20p            | 0                    | 0                | 6:00p                   | .0007           | 0                |
| 4-27                                                                                                                                                                                                      | .06                  | 0                  | :26              | .30                  | .03              | :30                     | .0010           | .0004            |
| 4-28                                                                                                                                                                                                      | .07                  | 0                  | :31              | 1.44                 | .15              | :45                     | .0060           | .0011            |
| 4-30                                                                                                                                                                                                      | .19                  | .0053              | :35              | 1.80                 | .27              | :50                     | .0096           | .0018            |
| 5-1                                                                                                                                                                                                       | .13                  | .0231              | :42              | 5.23                 | .88              | :54                     | .0332           | .0030            |
| 5-2                                                                                                                                                                                                       | .38                  | .1074              | :50              | .23                  | .91              | :56                     | .0694           | .0047            |
| 5-3                                                                                                                                                                                                       | 0                    | .0268              |                  |                      |                  | :58                     | .126            | .0080            |
| 5-4                                                                                                                                                                                                       | 0                    | .0134              |                  |                      |                  | 7:00                    | .151            | .0126            |
| 5-5                                                                                                                                                                                                       | .65                  | .0251              |                  |                      |                  | :02                     | .130            | .0173            |
| 5-6                                                                                                                                                                                                       | 0                    | .1150              |                  | Total Rainfall       |                  | :08                     | .122            | .0297            |
| 5-7                                                                                                                                                                                                       | 0                    | .0173              |                  | R-2                  | .85              | :15                     | .111            | .0433            |
| 7-8                                                                                                                                                                                                       | 0                    | .0057              |                  | R-3                  | .83              | :20                     | .111            | .0525            |
| 5-9                                                                                                                                                                                                       | 0                    | .0026              |                  |                      |                  | :25                     | .116            | .0619            |
| 5-10                                                                                                                                                                                                      | 0                    | .0015              |                  | Weighted Average     | .86              | :30                     | .118            | .0716            |
| 5-11                                                                                                                                                                                                      | .32                  | .0074              |                  |                      |                  | :35                     | .117            | .0814            |
| 5-12                                                                                                                                                                                                      | .30                  | .0197              |                  |                      |                  | :50                     | .0906           | .1071            |
| <u>Watershed Conditions:</u> 21.7%<br>of area was in permanent pasture,<br>11% in ungrazed woods, 1.6% in<br>roads, 1.2% in farmsteads, and<br>64.5% in 4 yr. rotation of corn,<br>small grain, hay, hay. |                      |                    |                  |                      |                  | 8:00                    | .0812           | .1214            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | :30                     | .0720           | .1594            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 9:00                    | .0637           | .1930            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 10:00                   | .0475           | .2486            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 12:00                   | .0236           | .3191            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 5-14-56                 |                 |                  |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 2:00a                   | .0135           | .3544            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 4:00                    | .0090           | .3767            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 6:00                    | .0064           | .3922            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 8:00                    | .0049           | .4034            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 10:00                   | .0039           | .4122            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 12:00                   | .0029           | .4190            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 3:00p                   | .0022           | .4265            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 6:00                    | .0014           | .4319            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 9:00                    | .0012           | .4358            |
|                                                                                                                                                                                                           |                      |                    |                  |                      |                  | 12:00                   | .0009           | .4388            |
| Notes: To convert runoff in in/hr to cfs, multiply by 347.864.                                                                                                                                            |                      |                    |                  |                      |                  |                         |                 |                  |

| Colby, Wisconsin                                                                                                                                                                                   |                      |                    | Watershed W-1    |                      |                  | (29.1)           | Area - 345 acres |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|------------------|------------------|
| Antecedent conditions                                                                                                                                                                              |                      |                    | Rainfall         |                      |                  | Runoff           |                  |                  |
| Date                                                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)  | Acc.<br>(inches) |
| Event of June 4, 1958                                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                  |                  |
| 5-8-58                                                                                                                                                                                             | .05                  | 0                  | 6-4-58           | Raingage             | R-1              | 6-4-58           |                  |                  |
| 5-10                                                                                                                                                                                               | .03                  | 0                  | 8:50p            | 0                    | 0                | 9:22p            | 0                | 0                |
| 5-14                                                                                                                                                                                               | T                    | 0                  | 9:12             | .14                  | .05              | :40              | .0031            | .0004            |
| 5-17                                                                                                                                                                                               | .10                  | 0                  | :20              | 5.25                 | .75              | :42              | .0453            | .0010            |
| 5-24                                                                                                                                                                                               | .65                  | 0                  | :24              | 2.70                 | .93              | :43              | .153             | .0027            |
| 5-26                                                                                                                                                                                               | .11                  | 0                  | :30              | 4.60                 | 1.39             | :46              | .0864            | .0079            |
| 5-31                                                                                                                                                                                               | .57                  | 0                  | :40              | 2.04                 | 1.73             | :54              | .0841            | .0195            |
| 6-3                                                                                                                                                                                                | .10                  | 0                  | :45              | 1.44                 | 1.85             | 10:00            | .106             | .0288            |
|                                                                                                                                                                                                    |                      |                    | :50              | 3.84                 | 2.17             | :12              | .180             | .0567            |
|                                                                                                                                                                                                    |                      |                    | :53              | 3.20                 | 2.33             | :18              | .221             | .0767            |
| Watershed Conditions: 21.7%<br>of area was in permanent pasture,<br>11% in ungrazed woods, 1.6% in<br>roads, 1.2% in farmsteads, and<br>64.5% in 4 yr. rotation of corn,<br>small grain, hay, hay. |                      |                    | :56              | .60                  | 2.36             | :24              | .313             | .1034            |
|                                                                                                                                                                                                    |                      |                    | 10:02            | 4.40                 | 2.80             | :27              | .433             | .1218            |
|                                                                                                                                                                                                    |                      |                    | :05              | .80                  | 2.84             | :30              | .497             | .1451            |
|                                                                                                                                                                                                    |                      |                    | :08              | 3.20                 | 3.00             | :33              | .545             | .1711            |
|                                                                                                                                                                                                    |                      |                    | :11              | 1.20                 | 3.06             | :36              | .576             | .1991            |
|                                                                                                                                                                                                    |                      |                    | :30              | .44                  | 3.20             | :38              | .557             | .2180            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :40              | .517             | .2359            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :50              | .436             | .3149            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :55              | .416             | .3504            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 11:00            | .431             | .3857            |
|                                                                                                                                                                                                    |                      |                    |                  | Total Rainfall       |                  | :08              | .436             | .4435            |
|                                                                                                                                                                                                    |                      |                    |                  | R-2                  | 3.12             | :15              | .410             | .4929            |
|                                                                                                                                                                                                    |                      |                    |                  | R-3                  | 3.40             | :20              | .376             | .5256            |
|                                                                                                                                                                                                    |                      |                    |                  | Weighted Average     | 3.23             | :30              | .330             | .5844            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :45              | .264             | .6587            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12:00            | .218             | .7189            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 6-5-58           |                  |                  |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12:15a           | .185             | .7692            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :30              | .160             | .8122            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 1:00             | .132             | .8850            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :30              | .113             | .9460            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 2:00             | .0944            | .9978            |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :30              | .0694            | 1.0387           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 3:00             | .0505            | 1.0687           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :30              | .0382            | 1.0909           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 4:00             | .0324            | 1.1090           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 5:00             | .0246            | 1.1375           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 6:00             | .0191            | 1.1593           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 8:00             | .0125            | 1.1909           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 10:00            | .0082            | 1.2117           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12:00            | .0061            | 1.2261           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12:00p           | .0011            | 1.2577           |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 6-5-58           |                  |                  |
|                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12 mid           | 0                | 1.2689           |

Notes: To convert runoff in in/hr to cfs, multiply by 347.864 .

Notes: To convert runoff in in/hr to cfs, multiply by 347.864.









| Fennimore, Wisconsin                                                                                                                                |                      |                    | Watershed W-1     |                      |                  | (31.1)           | Area - 330 acres |                  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-------------------|----------------------|------------------|------------------|------------------|------------------|--|
| Antecedent conditions                                                                                                                               |                      |                    | Rainfall          |                      |                  | Runoff           |                  |                  |  |
| Date                                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time  | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)  | Acc.<br>(inches) |  |
| Event of August 12, 1943                                                                                                                            |                      |                    |                   |                      |                  |                  |                  |                  |  |
| 7-13-43                                                                                                                                             | 0                    | .0103              | 8-12-43           | Raingage             | R-2              | 8-12-43          |                  |                  |  |
| 7-14                                                                                                                                                | .22                  | .0103              | 4:48a             | 0                    | 0                | 4:48a            | .0121            | 0                |  |
| 7-15                                                                                                                                                | 0                    | .0103              | :50               | 1.50                 | .05              | :52              | .0269            | .0013            |  |
| 7-16                                                                                                                                                | 1.49                 | .0347              | :53               | 8.20                 | .46              | :56              | .0768            | .0046            |  |
| 7-17                                                                                                                                                | 0                    | .0138              | :58               | 6.72                 | 1.02             | :58              | .140             | .0081            |  |
| 7-18                                                                                                                                                | 0                    | .0120              | 5:06              | 5.03                 | 1.69             | 5:00             | .225             | .0142            |  |
| 7-19                                                                                                                                                | 0                    | .0111              | :13               | 2.14                 | 1.94             | :02              | .258             | .0224            |  |
| 7-20 to 23                                                                                                                                          | 0                    | .0412              |                   |                      |                  | :06              | .286             | .0403            |  |
| 7-24                                                                                                                                                | .19                  | .0103              |                   |                      |                  | :09              | .378             | .0564            |  |
| 7-25 to 27                                                                                                                                          | 0                    | .0309              |                   |                      |                  | :12              | .522             | .0798            |  |
| 7-28                                                                                                                                                | .14                  | .0103              |                   | Raingage             | R-5              | :15              | .813             | .1127            |  |
| 7-29                                                                                                                                                | .06                  | .0103              | 4:47a             | 0                    | 0                | :16              | .900             | .1270            |  |
| 7-30 to 8-1                                                                                                                                         | 0                    | .0309              | :51               | 1.35                 | .09              | :17              | .906             | .1421            |  |
| 8-2                                                                                                                                                 | .16                  | .0103              | :55               | 9.30                 | .71              | :19              | .873             | .1720            |  |
| 8-3 to 8                                                                                                                                            | 0                    | .0618              | 5:00              | 7.44                 | 1.33             | :22              | .732             | .2152            |  |
| 8-9                                                                                                                                                 | .20                  | .0103              | :07               | 4.88                 | 1.90             | :24              | .648             | .2382            |  |
| 8-10 to 11                                                                                                                                          | 0                    | .0206              | :14               | 2.66                 | 2.21             | :28              | .507             | .2763            |  |
| 8-12                                                                                                                                                | 1.05                 | .0057              |                   |                      |                  | :32              | .396             | .3065            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  | :36              | .336             | .3311            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  | :42              | .251             | .3604            |  |
| Watershed Conditions: 31.4%<br>of area was in hay, 28.5% in corn,<br>23.0% in pasture, 11.6% in small<br>grain, and 5.5% in roads and<br>buildings. |                      |                    |                   | Raingage             | R-8              | :48              | .191             | .3824            |  |
|                                                                                                                                                     |                      |                    | 4:49a             | 0                    | 0                | 6:01             | .1008            | .4132            |  |
|                                                                                                                                                     |                      |                    | :55               | 9.30                 | .93              | :15              | .0537            | .4305            |  |
|                                                                                                                                                     |                      |                    | 5:00              | 6.36                 | 1.46             | :30              | .0330            | .4412            |  |
|                                                                                                                                                     |                      |                    | :07               | 4.62                 | 2.00             | 7:00             | .0168            | .4529            |  |
|                                                                                                                                                     |                      |                    | :13               | 3.20                 | 2.32             | 8:00             | .0057            | .4626            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  | 9:00             | .0029            | .4664            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  | 12:00p           | .0015            | .4726            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  | 12:00a           | .0010            | .4871            |  |
|                                                                                                                                                     |                      |                    |                   |                      |                  |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    | Total Rainfall    |                      |                  |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-1                  | 2.13             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-3                  | 2.11             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-4                  | 2.00             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-6                  | 2.16             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-7                  | 2.15             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    |                   | R-9                  | 2.32             |                  |                  |                  |  |
|                                                                                                                                                     |                      |                    | Watershed Average |                      | 2.15             |                  |                  |                  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 332.750 .

Notes: To convert runoff in in/hr to cfs, multiply by 332.750.

| Fennimore, Wisconsin   |                      |                    | Watershed W-1    |                      |                  | (31.1) Area - 330 acres |                 |                  |
|------------------------|----------------------|--------------------|------------------|----------------------|------------------|-------------------------|-----------------|------------------|
| Antecedent conditions  |                      |                    | Rainfall         |                      |                  | Runoff                  |                 |                  |
| Date                   | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time        | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of July 11, 1944 |                      |                    |                  |                      |                  |                         |                 |                  |
| 6-12-44                | 1.81                 | .0691              | 7-11-44          | Raingage             | R-9              | 7-11-44                 |                 |                  |
| 6-13                   | .44                  | .0417              | 6:30p            | 0                    | 0                | 6:30p                   | .0010           | 0                |
| 6-14                   | 0                    | .0223              | :40              | 3.24                 | .54              | :44                     | .0054           | .0005            |
| 6-15                   | .75                  | .0340              | :45              | 6.36                 | 1.07             | :48                     | .0268           | .0014            |
| 6-16                   | 0                    | .0147              | :50              | 6.36                 | 1.60             | :51                     | .0750           | .0041            |
| 6-17                   | 1.37                 | .3492              | 7:00             | 1.80                 | 1.90             | :52                     | .0666           | .0053            |
| 6-18 to 21             | 0                    | .0896              | :20              | .12                  | 1.94             | :55                     | .108            | .0095            |
| 6-22                   | 1.53                 | .3674              |                  |                      |                  | :58                     | .152            | .0144            |
| 6-23                   | 0                    | .0376              |                  |                      |                  | 7:00                    | .154            | .0195            |
| 6-24 to 25             | 0                    | .0148              |                  |                      |                  | :03                     | .143            | .0270            |
| 6-26                   | .29                  | .0224              |                  | Total Rainfall       |                  | :05                     | .159            | .0319            |
| 6-27 to 7-9            | 0                    | .2912              |                  | R-1                  | 1.91             | :08                     | .206            | .0413            |
| 7-10                   | .03                  | .0224              |                  | R-2                  | 1.81             | :10                     | .215            | .0482            |
| 7-11                   | 0                    | .0185              |                  | R-3                  | 2.01             | :12                     | .254            | .0561            |
|                        |                      |                    |                  | R-4                  | 2.01             | :15                     | .286            | .0698            |
|                        |                      |                    |                  | R-5                  | 1.91             |                         |                 |                  |
|                        |                      |                    |                  | R-6                  | 2.00             | :18                     | .303            | .0845            |
|                        |                      |                    |                  | R-7                  | 1.96             | :21                     | .288            | .0995            |
|                        |                      |                    |                  | R-8                  | 1.94             | :24                     | .266            | .1134            |
|                        |                      |                    |                  | Watershed Average    |                  | :30                     | .208            | .1371            |
|                        |                      |                    |                  |                      | 1.94             | :36                     | .161            | .1555            |
|                        |                      |                    |                  |                      |                  | :48                     | .0960           | .1807            |
|                        |                      |                    |                  |                      |                  | 8:00                    | .0582           | .1959            |
|                        |                      |                    |                  |                      |                  | :24                     | .0260           | .2119            |
|                        |                      |                    |                  |                      |                  | :48                     | .0138           | .2195            |
|                        |                      |                    |                  |                      |                  | 9:00                    | .0104           | .2219            |
|                        |                      |                    |                  |                      |                  | 10:00                   | .0052           | .2287            |
|                        |                      |                    |                  |                      |                  | 12:00a                  | .0027           | .2363            |
|                        |                      |                    |                  |                      |                  | 7-12-44                 |                 |                  |
|                        |                      |                    |                  |                      |                  | 12:00p                  | .0011           | .2540            |
|                        |                      |                    |                  |                      |                  | 12:00a                  | .0010           | .2678            |

Notes: To convert runoff in in/hr to cfs, multiply by 332.750.

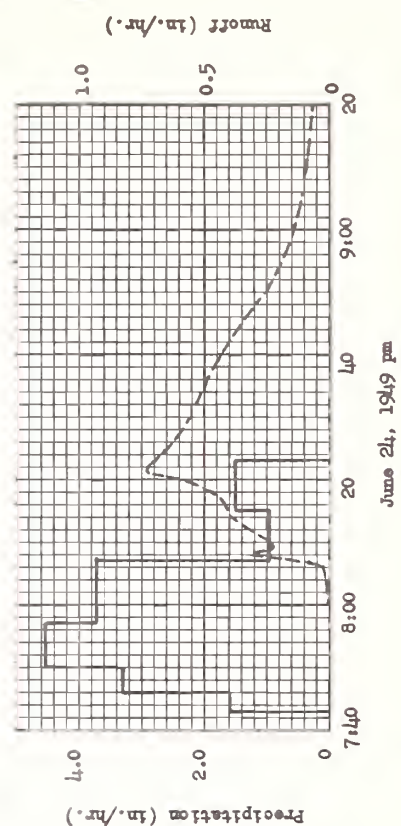
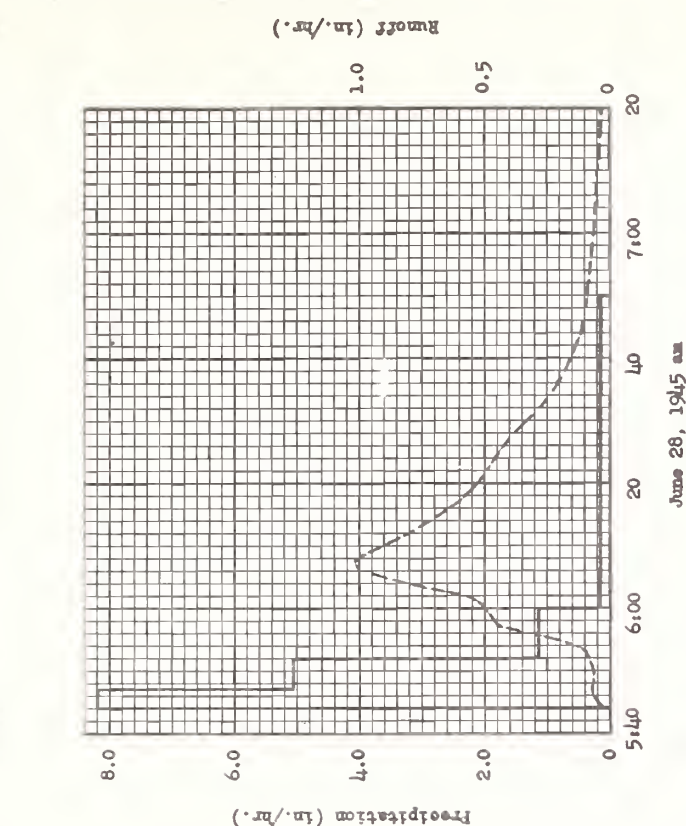
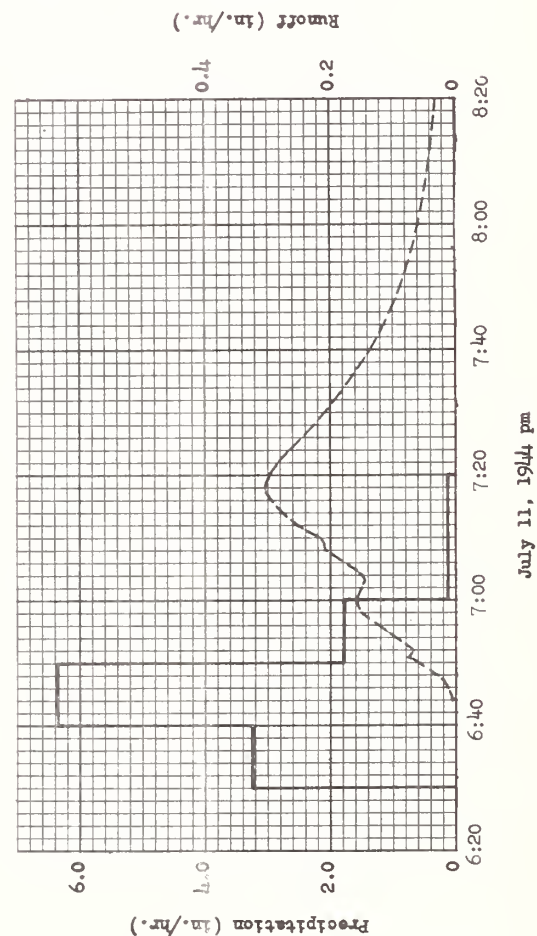
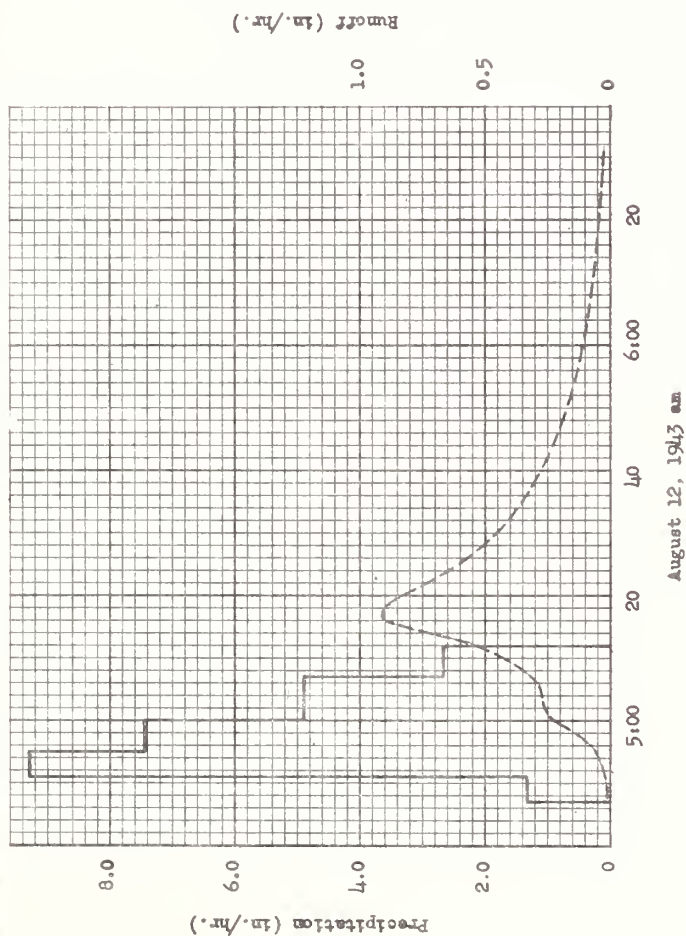
| Fennimore, Wisconsin                                                                                                                           |                   |                 | Watershed W-1 (31.1)   |                   |               | Area - 330 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|------------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                          |                   |                 | Rainfall               |                   |               | Runoff           |              |               |
| Date                                                                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time          | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| 5-29-45                                                                                                                                        | 0                 | .0138           | Event of June 28, 1945 |                   |               | 6-28-45          |              |               |
| 5-30                                                                                                                                           | 0                 | .0138           | 6-28-45                | Raingage          | R-4           | 5:44a            | .0291        | 0             |
| 5-31                                                                                                                                           | .52               | .0197           | 5:44a                  | 0                 | 0             | 5:44a            | .0654        | .0015         |
| 6-1                                                                                                                                            | 1.78              | .3913           | :47                    | 8.20              | .41           | :46              | .0741        | .0027         |
| 6-2                                                                                                                                            | .03               | .0275           | :52                    | 5.04              | .83           | :47              | .0708        | .0039         |
|                                                                                                                                                |                   |                 | 6:00                   | 1.13              | .98           | :48              |              |               |
| 6-3                                                                                                                                            | 0                 | .0249           | :50                    | .14               | 1.10          | :50              | .0672        | .0062         |
| 6-4 to 5                                                                                                                                       | 0                 | .0446           |                        |                   |               | :53              | .0975        | .0105         |
| 6-6                                                                                                                                            | 0                 | .0201           |                        |                   |               | :54              | .124         | .0121         |
| 6-7 to 8                                                                                                                                       | 0                 | .0378           |                        |                   |               | :57              | .438         | .0250         |
| 6-9                                                                                                                                            | .18               | .0223           |                        |                   |               | 6:00             | .498         | .0485         |
| 6-10                                                                                                                                           | .51               | .0278           |                        | Total Rainfall    |               | :02              | .579         | .0660         |
| 6-11 to 13                                                                                                                                     | 0                 | .0669           |                        | R-1               | 1.08          | :04              | .831         | .0890         |
| 6-14                                                                                                                                           | .59               | .0278           |                        | R-2               | 1.07          | :06              | .993         | .1297         |
| 6-15                                                                                                                                           | .53               | .0292           |                        | R-3               | 1.08          | :08              | 1.01         | .1531         |
| 6-16                                                                                                                                           | 0                 | .0200           |                        | R-5               | 1.09          | :10              | .897         | .1853         |
|                                                                                                                                                |                   |                 |                        | R-6               | 1.10          |                  |              |               |
| 6-17                                                                                                                                           | .06               | .0180           |                        | R-7               | 1.05          | :12              | .801         | .2136         |
| 6-18 to 23                                                                                                                                     | 0                 | .0942           |                        | R-8               | 1.08          | :18              | .576         | .2812         |
| 6-24                                                                                                                                           | .95               | .0220           |                        | R-9               | 1.15          | :24              | .465         | .3323         |
| 6-25                                                                                                                                           | 0                 | .0201           |                        |                   |               | :30              | .330         | .3724         |
| 6-26                                                                                                                                           | .05               | .0187           | Watershed Average      |                   | 1.09          | :36              | .200         | .3992         |
| 6-27                                                                                                                                           | .22               | .0157           |                        |                   |               | :43              | .123         | .4175         |
| 6-28                                                                                                                                           | .94               | .0165           |                        |                   |               | :52              | .0780        | .4323         |
|                                                                                                                                                |                   |                 |                        |                   |               | 7:00             | .0588        | .4413         |
|                                                                                                                                                |                   |                 |                        |                   |               | :12              | .0378        | .4508         |
|                                                                                                                                                |                   |                 |                        |                   |               | :36              | .0183        | .4615         |
|                                                                                                                                                |                   |                 |                        |                   |               | 8:00             | .0104        | .4671         |
|                                                                                                                                                |                   |                 |                        |                   |               | 9:00             | .0052        | .4740         |
|                                                                                                                                                |                   |                 |                        |                   |               | 10:00            | .0033        | .4781         |
|                                                                                                                                                |                   |                 |                        |                   |               | 11:00            | .0022        | .4808         |
|                                                                                                                                                |                   |                 |                        |                   |               | 12:00            | .0016        | .4827         |
| <p>Watershed Conditions: 32.6% of area was in corn, 21.9% in small grain, 21.7% in hay, 18.3% in pasture, and 5.5% in roads and buildings.</p> |                   |                 |                        |                   |               |                  |              |               |

Notes: To convert runoff in in/hr to cfs, multiply by 332.750.

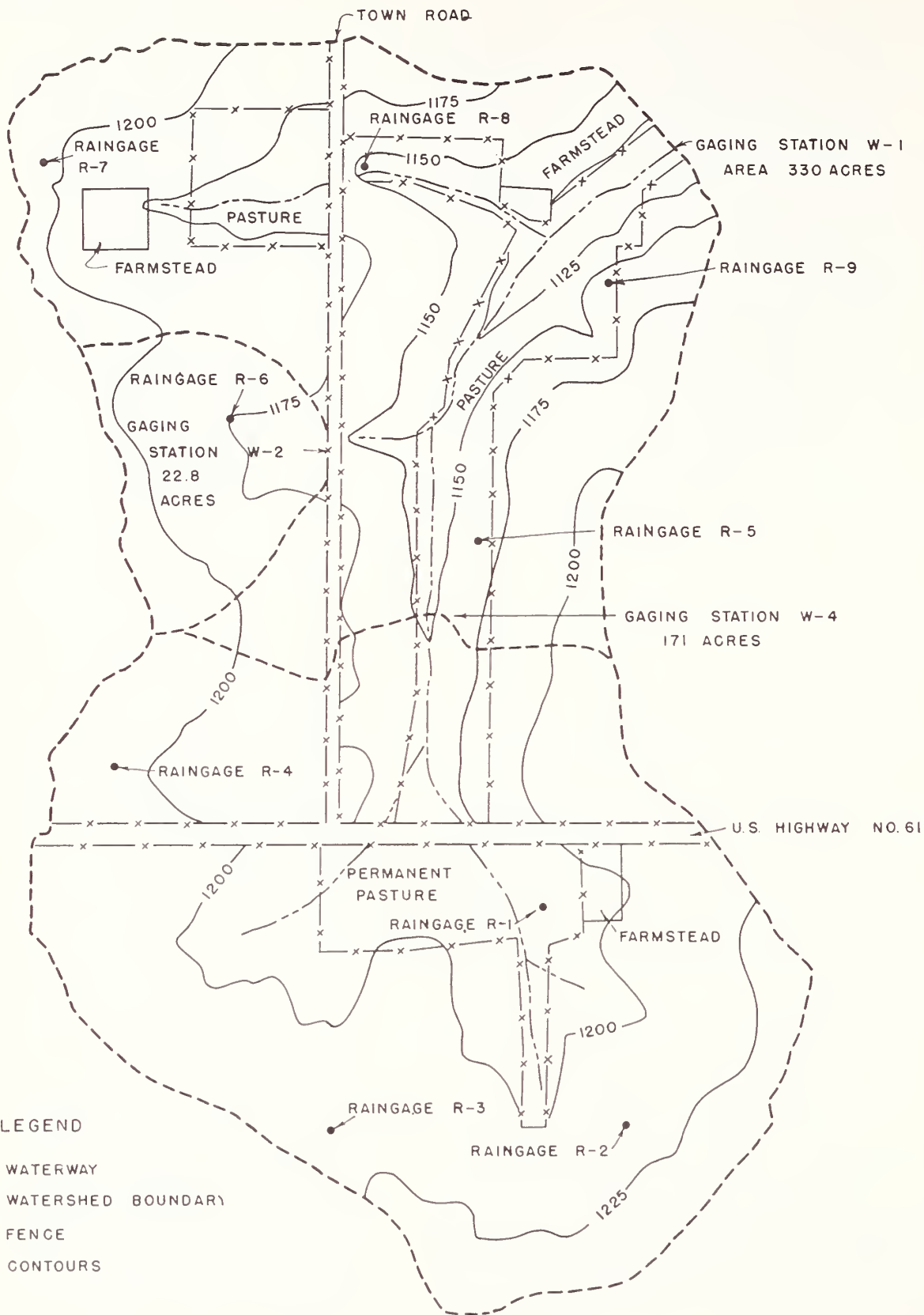


| Fennimore, Wisconsin                                                                                                                           |                      |                    | Watershed W-1    |                      |                  | (31.1) Area - 330 acres |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|-------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                          |                      |                    | Rainfall         |                      |                  | Runoff                  |                 |                  |
| Date                                                                                                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time        | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of June 24, 1949</b>                                                                                                                  |                      |                    |                  |                      |                  |                         |                 |                  |
| 5-25-49                                                                                                                                        | .04                  | .0011              | 6-24-49          | Raingage             | R-8              | 6-24-49                 |                 |                  |
| 5-26                                                                                                                                           | 0                    | .0011              | 7:43p            | 0                    | 0                | 7:20p                   | .0001           | 0                |
| 5-27                                                                                                                                           | .05                  | .0011              | :46              | 1.60                 | .08              | :50                     | .0007           | 0                |
| 5-28 to 31                                                                                                                                     | 0                    | .0014              | :50              | 3.30                 | .30              | 8:00                    | .0059           | .0004            |
| 6-1                                                                                                                                            | .28                  | .0012              | :57              | 4.55                 | .83              | :06                     | .0217           | .0016            |
| 6-2                                                                                                                                            | .54                  | .0013              | 8:07             | 3.72                 | 1.45             | :07                     | .0851           | .0027            |
| 6-3                                                                                                                                            | 0                    | .0014              | :15              | .98                  | 1.58             | :08                     | .322            | .0061            |
| 6-4                                                                                                                                            | 0                    | .0015              | :23              | 1.50                 | 1.78             | :09                     | .225            | .0107            |
| 6-5 to 10                                                                                                                                      | 0                    | .0096              | 9:15             | .19                  | 1.94             | :10                     | .228            | .0145            |
| 6-11                                                                                                                                           | 0                    | .0017              | 10:50            | .05                  | 2.02             | :12                     | .322            | .0237            |
| 6-12                                                                                                                                           | .25                  | .0020              | 1:00             | .03                  | 2.09             | :14                     | .399            | .0357            |
| 6-13                                                                                                                                           | .02                  | .0021              |                  |                      |                  | :16                     | .417            | .0493            |
| 6-14                                                                                                                                           | 1.92                 | .0100              |                  |                      |                  | :18                     | .459            | .0639            |
| 6-15 to 19                                                                                                                                     | 0                    | .0050              |                  |                      |                  | :20                     | .597            | .0815            |
| 6-20                                                                                                                                           | .54                  | .0010              |                  |                      |                  | :21                     | .723            | .0925            |
| 6-21                                                                                                                                           | .27                  | .0028              |                  | Total Rainfall       |                  | :24                     | .671            | .1275            |
| 6-22                                                                                                                                           | .03                  | .0011              |                  | R-1                  | 2.20             | :30                     | .555            | .1885            |
| 6-23                                                                                                                                           | 1.86                 | .0178              |                  | R-2                  | 2.18             | :36                     | .498            | .2421            |
| 6-24                                                                                                                                           | .20                  | .0013              |                  | R-3                  | 2.40             | :42                     | .396            | .2864            |
|                                                                                                                                                |                      |                    |                  | R-4                  | 2.00             | :48                     | .285            | .3200            |
|                                                                                                                                                |                      |                    |                  | R-5                  | 2.10             |                         |                 |                  |
|                                                                                                                                                |                      |                    |                  | R-6                  | 1.90             | :54                     | .199            | .3441            |
|                                                                                                                                                |                      |                    |                  | R-7                  | 1.97             | 9:00                    | .142            | .3611            |
|                                                                                                                                                |                      |                    |                  | R-9                  | 2.27             | :12                     | .0852           | .3835            |
|                                                                                                                                                |                      |                    |                  |                      |                  | :30                     | .0423           | .4017            |
|                                                                                                                                                |                      |                    |                  |                      |                  | 10:00                   | .0165           | .4154            |
|                                                                                                                                                |                      |                    |                  | Watershed Average    |                  |                         |                 |                  |
|                                                                                                                                                |                      |                    |                  |                      | 2.16             | 11:00                   | .0042           | .4241            |
|                                                                                                                                                |                      |                    |                  |                      |                  | 12:00                   | .0014           | .4267            |
| <p>Watershed Conditions: 30.4% of area was in pasture, 27.8% in small grain, 19.9% in corn, 16.4% in hay, and 5.5% in roads and buildings.</p> |                      |                    |                  |                      |                  |                         |                 |                  |

Notes: To convert runoff in in/hr to cfs, multiply by 332.750 .



APPROXIMATE  
TRUE NORTH



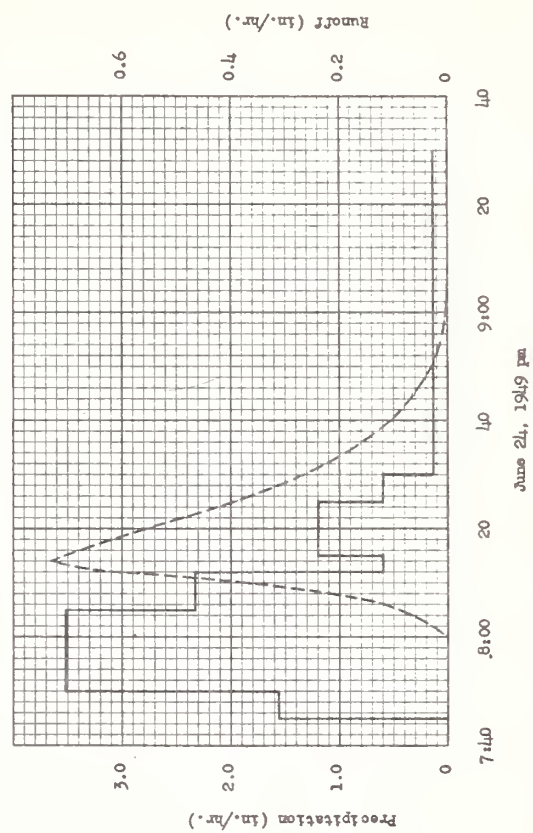
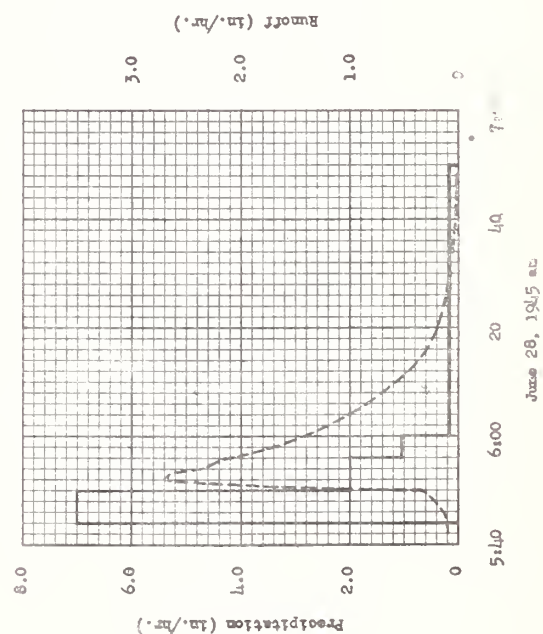
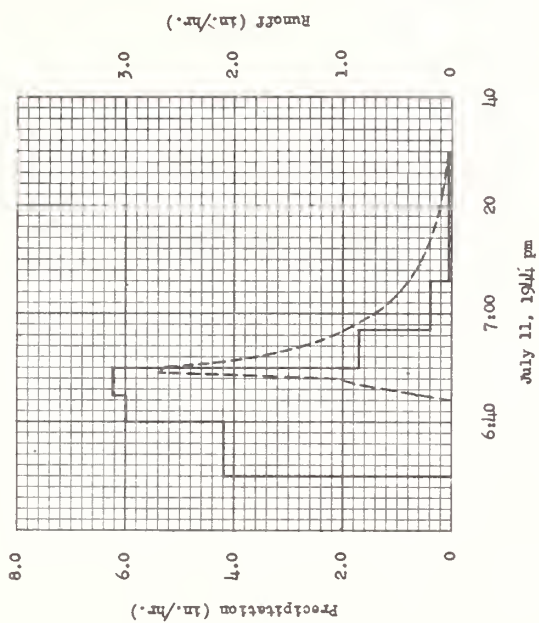
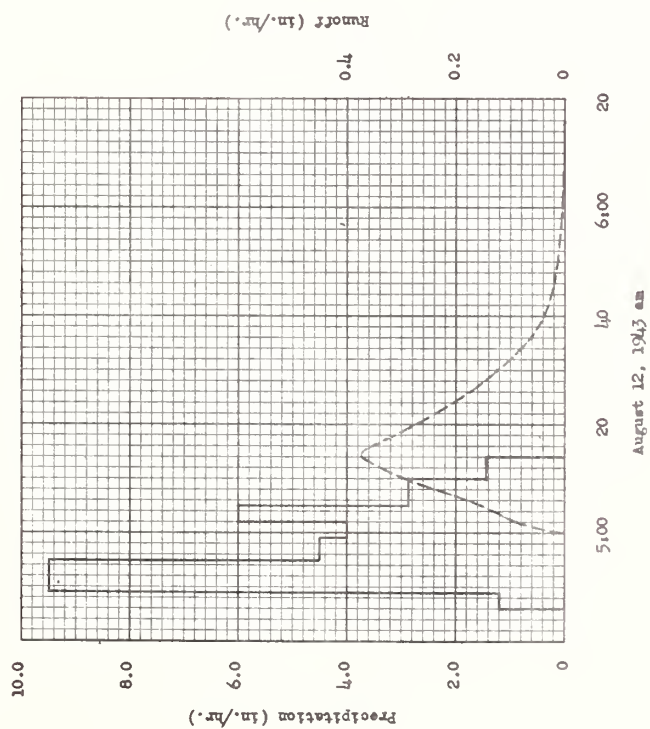
FENNIMORE, WISCONSIN  
WATERSHED W 1

| Fennimore, Wisconsin                                                                                 |                      |                    | Watershed W-2 $\sqrt{1}$ (31.2) |                      |                  | Area - 22.8 acres |                 |                  |
|------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                |                      |                    | Rainfall                        |                      |                  | Runoff            |                 |                  |
| Date                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time                | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
|                                                                                                      |                      |                    | <u>Event of August 12, 1943</u> |                      |                  |                   |                 |                  |
| 7-14-43                                                                                              | .21                  | 0                  | 8-12-43                         | Raingage             | R-6              | 8-12-43           |                 |                  |
| 7-16                                                                                                 | 1.45                 | 0                  | 4:46a                           | 0                    | 0                | 4:59a             | 0               | 0                |
| 7-24                                                                                                 | .18                  | 0                  | 4:49                            | 1.20                 | .06              | 5:00              | 0               | T                |
| 7-28                                                                                                 | .12                  | 0                  | 4:55                            | 9.50                 | 1.01             | 4:02              | .0926           | .007             |
| 7-29                                                                                                 | .06                  | 0                  | 4:59                            | 4.50                 | 1.31             | 4:05              | .152            | .013             |
| 8-2                                                                                                  | .12                  | 0                  | 5:02                            | 4.00                 | 1.51             | 4:08              | .243            | .023             |
| 8-9                                                                                                  | .16                  | 0                  | 4:05                            | 6.00                 | 1.81             | 4:12              | .340            | .043             |
| 8-12                                                                                                 | .99                  | 0                  | 4:10                            | 2.88                 | 2.05             | 4:14              | .371            | .055             |
| <u>Watershed Conditions: 73.1%</u><br>of area was in hay, 24.0% in corn,<br>and 2.9% in small grain. |                      |                    | 4:14                            | 1.65                 | 2.16             | 4:16              | .356            | .067             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:20              | .275            | .088             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:25              | .192            | .107             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:30              | .126            | .121             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:35              | .0726           | .129             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:40              | .0396           | .134             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:45              | .0228           | .136             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:50              | .0114           | .138             |
|                                                                                                      |                      |                    |                                 |                      |                  | 6:00              | .0037           | .139             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:15              | .0017           | .140             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:30              | 0               | .140             |
|                                                                                                      |                      |                    | <u>Event of July 11, 1944</u>   |                      |                  |                   |                 |                  |
| 6-11-44                                                                                              | .10                  | 0                  | 7-11-44                         | Raingage             | R-6              | 7-11-44           |                 |                  |
| 6-12                                                                                                 | 1.86                 | 0                  | 6:30p                           | 0                    | 0                | 6:44p             | 0               | 0                |
| 6-13                                                                                                 | .45                  | 0                  | 4:40                            | 4.20                 | .70              | 4:45              | .314            | .005             |
| 6-15                                                                                                 | .78                  | .026               | 4:45                            | 6.00                 | 1.20             | 4:46              | .576            | .013             |
| 6-17                                                                                                 | 1.51                 | .495               | 4:50                            | 6.24                 | 1.72             | 4:47              | .906            | .023             |
| 6-22                                                                                                 | 1.60                 | .538               | 4:57                            | 1.72                 | 1.92             | 4:48              | 1.06            | .039             |
| 6-26                                                                                                 | .28                  | 0                  | 7:06                            | .40                  | 1.98             | 4:49              | 2.69            | .071             |
| 7-10                                                                                                 | .02                  | 0                  | 4:30                            | .05                  | 2.00             | 4:50              | 2.64            | .115             |
| <u>Watershed Conditions: 51.3%</u><br>of area was in corn, 40.8% in<br>hay, and 7.9% in small grain. |                      |                    |                                 |                      |                  | 4:51              | 2.10            | .155             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:52              | 1.78            | .187             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:53              | 1.58            | .215             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:54              | 1.35            | .240             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:56              | 1.08            | .280             |
|                                                                                                      |                      |                    |                                 |                      |                  | 7:00              | .700            | .339             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:04              | .470            | .376             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:09              | .292            | .408             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:15              | .176            | .431             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:24              | .0679           | .449             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:36              | .0207           | .459             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:48              | .0061           | .461             |
|                                                                                                      |                      |                    |                                 |                      |                  | 8:00              | .0023           | .462             |
|                                                                                                      |                      |                    |                                 |                      |                  | 4:40              | 0               | .462             |

Notes:  $\sqrt{1}$  To convert runoff in in/hr to cfs, multiply by 22.988 .  
Watershed map included with Fennimore, Wisconsin Watershed W-I.



| Fennimore, Wisconsin                                           |                      |                    | Watershed W-2    |                      |                  | (31.2) Area - 22.8 acres |                 |                  |
|----------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|--------------------------|-----------------|------------------|
| Antecedent conditions                                          |                      |                    | Rainfall         |                      |                  | Runoff                   |                 |                  |
| Date                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time         | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 28, 1945                                         |                      |                    |                  |                      |                  |                          |                 |                  |
| 5-31-45                                                        | .59                  | 0                  | 6-28-45          | Raingage             | R-6              | 6-28-45                  |                 |                  |
| 6-1                                                            | 1.87                 | .427               | 5:44a            | 0                    | 0                | 5:36a                    | 0               | 0                |
| 6-2                                                            | .02                  | 0                  | 5:50             | 7.00                 | .70              | 5:37                     | .2144           | .002             |
| 6-9                                                            | .17                  | 0                  | 5:56             | 2.00                 | .90              | 5:38                     | .1074           | .005             |
| 6-10                                                           | .57                  | 0                  | 6:00             | 1.05                 | .97              | 5:42                     | .0984           | .011             |
| 6-14                                                           | .67                  | 0                  | 5:50             | .16                  | 1.10             | 5:46                     | .138            | .019             |
| 6-15                                                           | .53                  | 0                  |                  |                      |                  | 5:50                     | .332            | .033             |
| 6-17                                                           | .08                  | 0                  |                  |                      |                  | 5:51                     | 2.04            | .053             |
| 6-24                                                           | .90                  | 0                  |                  |                      |                  | 5:52                     | 2.68            | .092             |
| 6-26                                                           | .05                  | 0                  |                  |                      |                  | 5:53                     | 2.64            | .137             |
| 6-27                                                           | .25                  | 0                  |                  |                      |                  | 5:54                     | 2.36            | .178             |
| 6-28                                                           | .95                  | 0                  |                  |                      |                  | 5:56                     | 2.14            | .254             |
|                                                                |                      |                    |                  |                      |                  | 5:58                     | 1.66            | .316             |
|                                                                |                      |                    |                  |                      |                  | 6:00                     | 1.41            | .367             |
|                                                                |                      |                    |                  |                      |                  | 5:03                     | 1.07            | .429             |
|                                                                |                      |                    |                  |                      |                  | 5:06                     | .836            | .477             |
|                                                                |                      |                    |                  |                      |                  | 5:09                     | .635            | .514             |
|                                                                |                      |                    |                  |                      |                  | 5:12                     | .465            | .541             |
|                                                                |                      |                    |                  |                      |                  | 5:18                     | .239            | .576             |
|                                                                |                      |                    |                  |                      |                  | 5:24                     | .136            | .595             |
|                                                                |                      |                    |                  |                      |                  | 5:30                     | .0684           | .605             |
|                                                                |                      |                    |                  |                      |                  | 5:36                     | .0346           | .610             |
|                                                                |                      |                    |                  |                      |                  | 5:48                     | .0091           | .614             |
|                                                                |                      |                    |                  |                      |                  | 7:12                     | 0               | .615             |
| Event of June 24, 1949                                         |                      |                    |                  |                      |                  |                          |                 |                  |
| 5-25-49                                                        | .03                  | 0                  | 6-24-49          | Raingage             | R-6              | 6-24-49                  |                 |                  |
| 5-27                                                           | .06                  | 0                  | 7:45p            | 0                    | 0                | 8:00p                    | 0               | 0                |
| 6-1                                                            | .31                  | 0                  | 5:50             | 1.56                 | .13              | 5:02                     | .0299           | .001             |
| 6-2                                                            | .55                  | 0                  | 8:05             | 3.52                 | 1.01             | 5:04                     | .0652           | .002             |
| 6-12                                                           | .23                  | 0                  | 5:12             | 2.32                 | 1.28             | 5:06                     | .117            | .005             |
| 6-13                                                           | .03                  | 0                  | 5:15             | .60                  | 1.31             | 5:08                     | .212            | .011             |
| 6-14                                                           | 1.93                 | 0                  | 5:25             | 1.20                 | 1.51             | 5:10                     | .377            | .020             |
| 6-20                                                           | .63                  | 0                  | 5:30             | .60                  | 1.56             | 5:12                     | .600            | .037             |
| 6-21                                                           | .29                  | 0                  | 9:30             | .13                  | 1.69             | 5:14                     | .730            | .059             |
| 6-22                                                           | .04                  | 0                  | 11:30            | .06                  | 1.81             | 5:16                     | .674            | .082             |
| 6-23                                                           | 1.88                 | 0                  |                  |                      |                  | 5:18                     | .609            | .104             |
| 6-24                                                           | .29                  | 0                  |                  |                      |                  | 5:20                     | .552            | .123             |
|                                                                |                      |                    |                  |                      |                  | 5:22                     | .491            | .141             |
|                                                                |                      |                    |                  |                      |                  | 5:25                     | .388            | .163             |
|                                                                |                      |                    |                  |                      |                  | 5:30                     | .266            | .190             |
|                                                                |                      |                    |                  |                      |                  | 5:35                     | .174            | .208             |
|                                                                |                      |                    |                  |                      |                  | 5:40                     | .103            | .220             |
|                                                                |                      |                    |                  |                      |                  | 5:45                     | .0644           | .227             |
|                                                                |                      |                    |                  |                      |                  | 5:50                     | .0286           | .231             |
|                                                                |                      |                    |                  |                      |                  | 5:55                     | .0122           | .232             |
|                                                                |                      |                    |                  |                      |                  | 9:00                     | .0053           | .233             |
|                                                                |                      |                    |                  |                      |                  | 5:05                     | 0               | .233             |
| Notes: To convert runoff in in/hr to cfs, multiply by 22.988 . |                      |                    |                  |                      |                  |                          |                 |                  |





| Fennimore, Wisconsin                                                                                                                                |                      |                    | Watershed W-4 $\sqrt{1}$ |                      |                  | (31.4)           | Area - 171 acres |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------|----------------------|------------------|------------------|------------------|------------------|
| Antecedent conditions                                                                                                                               |                      |                    | Rainfall                 |                      |                  | Runoff           |                  |                  |
| Date                                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time         | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)  | Acc.<br>(inches) |
|                                                                                                                                                     |                      |                    | Event of August 12, 1943 |                      |                  |                  |                  |                  |
| 7-14-43                                                                                                                                             | .21                  | 0                  | 8-12-43                  | Raingage             | R-3              | 8-12-43          |                  |                  |
| 7-16                                                                                                                                                | 1.48                 | .0040              | 4:48a                    | 0                    | 0                | 4:44a            | 0                | 0                |
| 7-24                                                                                                                                                | .20                  | 0                  | :50                      | 1.80                 | .06              | :50              | .0163            | .0012            |
| 7-28                                                                                                                                                | .14                  | 0                  | :53                      | 9.60                 | .54              | :55              | .0196            | .0027            |
| 7-29                                                                                                                                                | .05                  | 0                  | :58                      | 7.08                 | 1.13             | :57              | .0541            | .0038            |
| 8-3                                                                                                                                                 | .16                  | 0                  | 5:07                     | 4.74                 | 1.84             | 5:00             | .130             | .0089            |
| 8-9                                                                                                                                                 | .21                  | 0                  | :13                      | 2.70                 | 2.11             | :01              | .300             | .0125            |
| 8-12                                                                                                                                                | 1.02                 | 0                  |                          |                      |                  | :02              | .992             | .0233            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :03              | 1.21             | .0417            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :04              | 1.11             | .0610            |
| Watershed Conditions: 34.6% of<br>area was in corn, 29.9% in hay,<br>17.9% in pasture, 11.9% in small<br>grain, and 5.7% in roads and<br>buildings. |                      |                    |                          | Total Rainfall       |                  | :06              | 1.07             | .0975            |
|                                                                                                                                                     |                      |                    |                          | R-1                  | 2.13             | :08              | 1.04             | .1327            |
|                                                                                                                                                     |                      |                    |                          | R-2                  | 1.94             | :12              | .881             | .1968            |
|                                                                                                                                                     |                      |                    |                          | R-4                  | 2.00             | :18              | .632             | .2726            |
|                                                                                                                                                     |                      |                    |                          | Average              | 2.05             | :24              | .415             | .3244            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :30              | .276             | .3583            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :36              | .173             | .3804            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :40              | .132             | .3905            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :50              | .0680            | .4064            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 6:00             | .0406            | .4153            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :20              | .0174            | .4244            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :40              | .0092            | .4286            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 8:00             | .0004            | .4325            |
|                                                                                                                                                     |                      |                    | Event of July 11, 1944   |                      |                  |                  |                  |                  |
| 6-12-44                                                                                                                                             | 1.75                 | .0318              | 7-11-44                  | Raingage             | R-3              | 7-11-44          |                  |                  |
| 6-13                                                                                                                                                | .47                  | .0044              | 6:26p                    | 0                    | 0                | 6:28p            | T                | 0                |
| 6-15                                                                                                                                                | .75                  | .0083              | :30                      | 3.00                 | .20              | :55              | .0174            | .0039            |
| 6-17                                                                                                                                                | 1.32                 | .2962              | :35                      | 3.24                 | .47              | :58              | .0928            | .0056            |
| 6-22                                                                                                                                                | 1.58                 | .3371              | :40                      | 3.72                 | .78              | :59              | .211             | .0081            |
| 6-26                                                                                                                                                | .31                  | 0                  | :45                      | 7.32                 | 1.39             | 7:00             | .216             | .0117            |
| 7-10                                                                                                                                                | .02                  | 0                  | :49                      | 4.95                 | 1.72             | :01              | .194             | .0151            |
|                                                                                                                                                     |                      |                    | :54                      | 2.16                 | 1.90             | :04              | .346             | .0278            |
|                                                                                                                                                     |                      |                    | 7:03                     | .47                  | 1.97             | :05              | .362             | .0337            |
|                                                                                                                                                     |                      |                    | :20                      | .14                  | 2.01             | :08              | .350             | .0514            |
| Watershed Conditions: 35.4% of<br>area was in corn, 22.7% in small<br>grain, 20.5% in hay, 15.7% in<br>pasture, and 5.7% in roads and<br>buildings. |                      |                    |                          | Total Rainfall       |                  | :12              | .327             | .0731            |
|                                                                                                                                                     |                      |                    |                          | R-1                  | 1.91             | :18              | .256             | .1022            |
|                                                                                                                                                     |                      |                    |                          | R-2                  | 1.81             | :24              | .193             | .1246            |
|                                                                                                                                                     |                      |                    |                          | R-4                  | 2.01             | :30              | .141             | .1413            |
|                                                                                                                                                     |                      |                    |                          | Average              | 1.94             | :36              | .104             | .1535            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :48              | .0597            | .1697            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 8:00             | .0375            | .1792            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :20              | .0183            | .1882            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | :40              | .0090            | .1925            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 9:00             | .0042            | .1945            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 10:00            | .0008            | .1962            |
|                                                                                                                                                     |                      |                    |                          |                      |                  | 12:00            | 0                | .1964            |

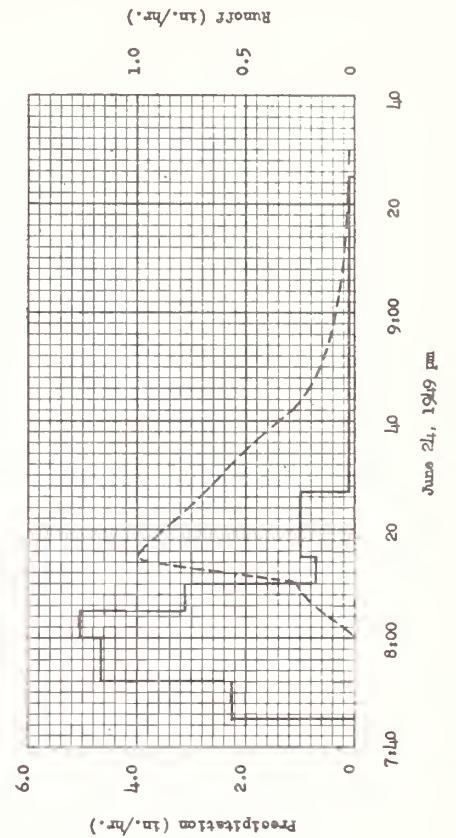
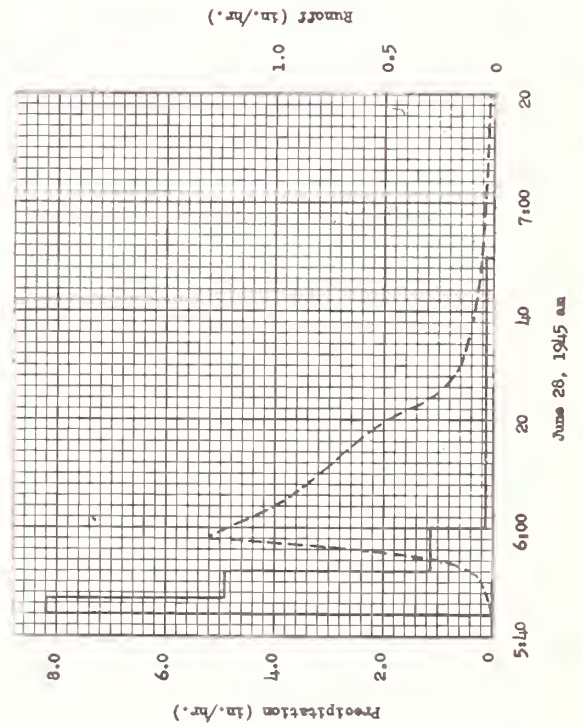
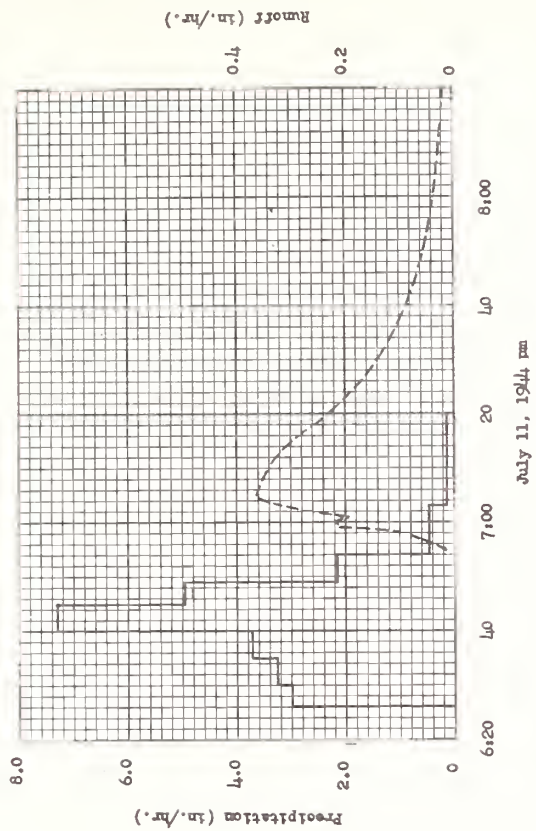
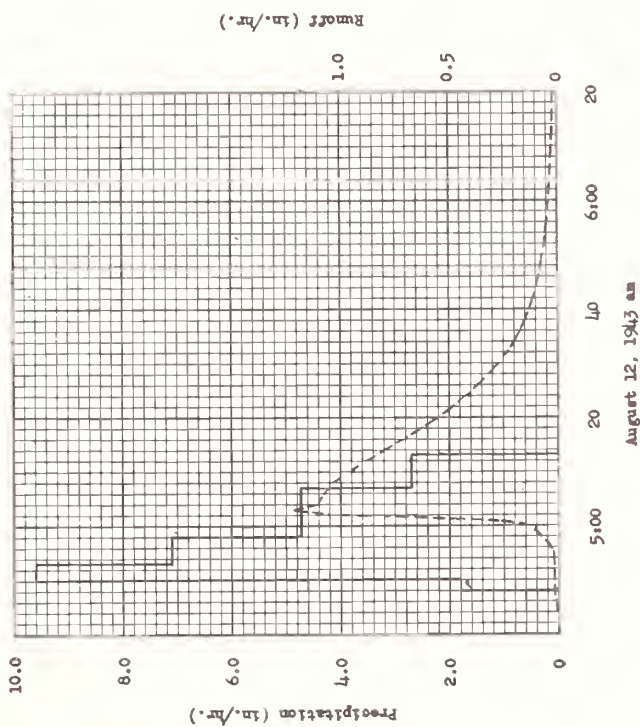
Notes: To convert runoff in in/hr to cfs, multiply by 172.425 .  
 $\sqrt{1}$  Watershed map included with Fennimore, Wisconsin Watershed W-I

Notes:  $\sqrt{1}$  To convert runoff in in/hr to cfs, multiply by 172.425.

Watershed map included with Fennimore, Wisconsin Watershed W-I



| Fennimore, Wisconsin                                                                                                                                        |                      |                    | Watershed W-4    |                      |                  | (31.4) Area - 171 Acres |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|-------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                       |                      |                    | Rainfall         |                      |                  | Runoff                  |                 |                  |
| Date                                                                                                                                                        | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time        | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of June 28, 1945</b>                                                                                                                               |                      |                    |                  |                      |                  |                         |                 |                  |
| 5-31-45                                                                                                                                                     | .54                  | .0010              | 6-28-45          | Raingage             | R-3              | 6-28-45                 |                 |                  |
| 6-1                                                                                                                                                         | 1.78                 | .3755              | 5:44a            | 0                    | 0                | 5:45a                   | .0052           | 0                |
| 6-2                                                                                                                                                         | .03                  | .0030              | 5:47             | 8.20                 | .41              | 5:48                    | .0281           | .0006            |
| 6-3 to 8                                                                                                                                                    | 0                    | .0180              | 5:52             | 4.92                 | .82              | 5:51                    | .0666           | .0030            |
| 6-9                                                                                                                                                         | .18                  | .0030              | 6:00             | 1.13                 | .97              | 5:54                    | .232            | .0103            |
| 6-10                                                                                                                                                        | .53                  | .0030              | 5:50             | .13                  | 1.08             | 5:56                    | .615            | .0235            |
| 6-11 to 13                                                                                                                                                  | 0                    | .0090              |                  |                      |                  | 5:57                    | .974            | .0367            |
| 6-14                                                                                                                                                        | .61                  | .0030              |                  |                      |                  | 5:58                    | 1.31            | .0557            |
| 6-15                                                                                                                                                        | .53                  | .0030              |                  |                      |                  | 6:00                    | 1.21            | .0974            |
| 6-16                                                                                                                                                        | 0                    | .0030              |                  |                      |                  | 6:04                    | .992            | .1710            |
| 6-17                                                                                                                                                        | .06                  | .0030              |                  |                      |                  | 6:09                    | .818            | .2459            |
| 6-18 to 23                                                                                                                                                  | 0                    | .0180              |                  | Total Rainfall       |                  | 6:15                    | .644            | .3190            |
| 6-24                                                                                                                                                        | .98                  | .0030              |                  | R-1                  | 1.08             | 6:18                    | .555            | .3489            |
| 6-25                                                                                                                                                        | 0                    | .0030              |                  | R-2                  | 1.07             | 6:22                    | .378            | .3800            |
| 6-26                                                                                                                                                        | .04                  | .0030              |                  | R-4                  | 1.10             | 6:26                    | .227            | .3995            |
| 6-27                                                                                                                                                        | .21                  | .0030              |                  | Average              | 1.08             | 6:30                    | .153            | .4117            |
| 6-28                                                                                                                                                        | .90                  | .0042              |                  |                      |                  | 6:36                    | .104            | .4254            |
| <b>Watershed Conditions:</b> 38.3% of<br>area was in corn, 22.5% in hay,<br>20.6% in small grain, 12.9% in<br>pasture, and 5.7% for roads and<br>buildings. |                      |                    |                  |                      |                  | 6:48                    | .0541           | .4398            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 7:00                    | .0335           | .4484            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 7:24                    | .0153           | .4584            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 8:00                    | .0054           | .4641            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 9:00                    | .0013           | .4668            |
| <b>Event of June 24, 1949</b>                                                                                                                               |                      |                    |                  |                      |                  |                         |                 |                  |
| 5-25-49                                                                                                                                                     | .04                  | 0                  | 6-24-49          | Raingage             | R-2              | 6-24-49                 |                 |                  |
| 5-27                                                                                                                                                        | .05                  | 0                  | 7:45p            | 0                    | 0                | 7:55p                   | 0               | 0                |
| 6-1                                                                                                                                                         | .27                  | 0                  | 7:52             | 2.23                 | .26              | 8:00                    | .0019           | .0002            |
| 6-2                                                                                                                                                         | .55                  | 0                  | 8:00             | 4.65                 | .88              | 8:03                    | .0893           | .0012            |
| 6-12                                                                                                                                                        | .25                  | 0                  | 8:05             | 5.04                 | 1.30             | 8:08                    | .246            | .0216            |
| 6-13                                                                                                                                                        | .01                  | 0                  | 8:10             | 3.12                 | 1.56             | 8:10                    | .268            | .0301            |
| 6-14                                                                                                                                                        | 2.00                 | 0                  | 8:15             | .72                  | 1.62             | 8:12                    | .586            | .0429            |
| 6-20                                                                                                                                                        | .48                  | 0                  | 8:27             | 1.00                 | 1.82             | 8:14                    | .945            | .0689            |
| 6-21                                                                                                                                                        | .27                  | 0                  | 9:25             | .11                  | 1.93             | 8:15                    | 1.00            | .0851            |
| 6-22                                                                                                                                                        | .03                  | 0                  | 9:55             | 0                    | 1.93             | 8:18                    | .940            | .1341            |
| 6-23                                                                                                                                                        | 1.83                 | .0056              | 12:30            | .07                  | 2.12             | 8:24                    | .760            | .2184            |
| 6-24                                                                                                                                                        | .26                  | 0                  |                  |                      |                  | 8:30                    | .615            | .2870            |
| <b>Watershed Conditions:</b> 26.4% of<br>area was in corn, 29.0% in small<br>grain, 17.5% in hay, 21.4% in<br>pasture, and 5.7% in roads and<br>buildings.  |                      |                    |                  |                      |                  | 8:36                    | .462            | .3408            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 8:42                    | .288            | .3784            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 8:48                    | .179            | .4016            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 9:00                    | .0905           | .4266            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 9:12                    | .0492           | .4403            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 9:24                    | .0300           | .4481            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 9:30                    | .0234           | .4508            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 10:00                   | .0055           | .4572            |
|                                                                                                                                                             |                      |                    |                  |                      |                  | 11:00                   | 0               | .4589            |
| <b>Notes:</b> To convert runoff in in/hr to cfs, multiply by 172.425.                                                                                       |                      |                    |                  |                      |                  |                         |                 |                  |







| Bentonville, Arkansas                                                                                                                                                                     |                      |                    | Watershed W-5    |                      |                  | (33.5)           |                 |                  | Area - 19.4 acres |       |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|-------|------|
| Antecedent conditions                                                                                                                                                                     |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |       |      |
| Date                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |       |      |
| Event of May 25, 1939                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |                   |       |      |
| 4-26-39                                                                                                                                                                                   | .40                  | 0                  | 5-25-39          | Raingage             | R-5              | 5-25-39          |                 |                  |                   |       |      |
| 4-27                                                                                                                                                                                      | .08                  | 0                  | 8:56a            | 0                    | 0                | 9:10a            | 0               | 0                |                   |       |      |
| 5-7                                                                                                                                                                                       | .15                  | 0                  | :58              | .30                  | .01              | :11              | .0277           | T                |                   |       |      |
| 5-8                                                                                                                                                                                       | 1.30                 | .0139              | 9:01             | 1.80                 | .10              | :14              | .0669           | .003             |                   |       |      |
| 5-11                                                                                                                                                                                      | .04                  | 0                  | :04              | .20                  | .11              | :16              | .1349           | .006             |                   |       |      |
| 5-12                                                                                                                                                                                      | 2.04                 | .2790              | :06              | .60                  | .13              | :18              | .2928           | .013             |                   |       |      |
| 5-13                                                                                                                                                                                      | .46                  | .0184              | :08              | 2.70                 | .22              | :20              | .3909           | .024             |                   |       |      |
| 5-17                                                                                                                                                                                      | .07                  | 0                  | :12              | 2.40                 | .38              | :22              | .6541           | .041             |                   |       |      |
| 5-18                                                                                                                                                                                      | .28                  | .0025              | :14              | 3.00                 | .48              | :24              | .7716           | .065             |                   |       |      |
| 5-21                                                                                                                                                                                      | .65                  | .0459              | :17              | 3.40                 | .65              | :26              | .8483           | .092             |                   |       |      |
| 5-22                                                                                                                                                                                      | .33                  | .0244              | :20              | 2.60                 | .78              | :28              | .8738           | .121             |                   |       |      |
| 5-24                                                                                                                                                                                      | .11                  | 0                  | :24              | 3.30                 | 1.00             | :31              | .8738           | .165             |                   |       |      |
| Watershed Conditions: 24% of the area in meadow, 16% idle, 45% in Spring oats, 8% in grain sorghum, 5% in oats and lespe-deza and 2% in orchard and orchard grass.                        |                      |                    | :26              | 2.40                 | 1.08             | :33              | .8176           | .193             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :28              | 2.70                 | 1.17             | :37              | .6643           | .242             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :30              | 3.30                 | 1.28             | :41              | .4982           | .281             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :32              | 2.10                 | 1.35             | :44              | .4114           | .303             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :34              | 1.20                 | 1.39             | :49              | .2984           | .332             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :36              | .30                  | 1.40             | :53              | .2320           | .350             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :48              | .05                  | 1.41             | 10:00            | .1538           | .372             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | 10:00            | .10                  | 1.43             | :10              | .0930           | .393             |                   |       |      |
|                                                                                                                                                                                           |                      |                    | :12e             | .15                  | 1.46             | :20              | .0572           | .405             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :35              | .0280           | .415             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | 11:00            | .0085           | .422             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :25              | .0026           | .424             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | 12:05e           | 0               | .424             |                   |       |      |
| Event of August 31, 1940                                                                                                                                                                  |                      |                    |                  |                      |                  |                  |                 |                  |                   |       |      |
| 8-4-41                                                                                                                                                                                    | .01                  | 0                  | 8-31-40          | Raingage             | R-5              | 8-31-40          |                 |                  |                   |       |      |
| 8-5                                                                                                                                                                                       | .35                  | 0                  | 1:20p            | 0                    | 0                | 1:42p            | 0               | 0                |                   |       |      |
| 8-9                                                                                                                                                                                       | .07                  | 0                  | :32              | .30                  | .06              | :46              | .0981           | .003             |                   |       |      |
| 8-10                                                                                                                                                                                      | 1.10                 | 0                  | :36              | 2.10                 | .20              | :48              | .1650           | .008             |                   |       |      |
| 8-11                                                                                                                                                                                      | .13                  | 0                  | :38              | 2.70                 | .29              | :51              | .2499           | .018             |                   |       |      |
| 8-15                                                                                                                                                                                      | 3.17                 | 1.1259             | :40              | 3.60                 | .41              | :53              | .2739           | .027             |                   |       |      |
| 8-17                                                                                                                                                                                      | 1.82                 | .0340              | :42              | 8.40                 | .69              | :54              | .2713           | .031             |                   |       |      |
| 8-18                                                                                                                                                                                      | .10                  | 0                  | :45              | 5.60                 | .97              | :55              | .2841           | .036             |                   |       |      |
| 8-26                                                                                                                                                                                      | .14                  | 0                  | :52e             | .17                  | .99              | :58              | .3138           | .051             |                   |       |      |
| 8-27                                                                                                                                                                                      | .62                  | .0043              |                  |                      |                  | 2:00             | .3265           | .062             |                   |       |      |
| 8-28                                                                                                                                                                                      | .03                  | 0                  |                  |                      |                  | :02              | .3388           | .073             |                   |       |      |
| Watershed Conditions: 24% of the area in meadow, 25% in peas, 13% in rye stubble, 11% in corn matured, 10% in cane, 8% in clover and grass, 8% idle, and 2% in orchard and orchard grass. |                      |                    |                  |                      |                  | :04              | .3347           | .084             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :08              | .3153           | .106             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :10              | .3035           | .116             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :15              | .2565           | .139             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :20              | .2105           | .159             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :25              | .1706           | .174             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :30              | .1354           | .187             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :40              | .0823           | .206             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :50              | .0455           | .216             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  |                  |                 |                  | 3:15              | .0085 | .225 |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | :25              | .0042           | .226             |                   |       |      |
|                                                                                                                                                                                           |                      |                    |                  |                      |                  | 4:40e            | 0               | .227             |                   |       |      |

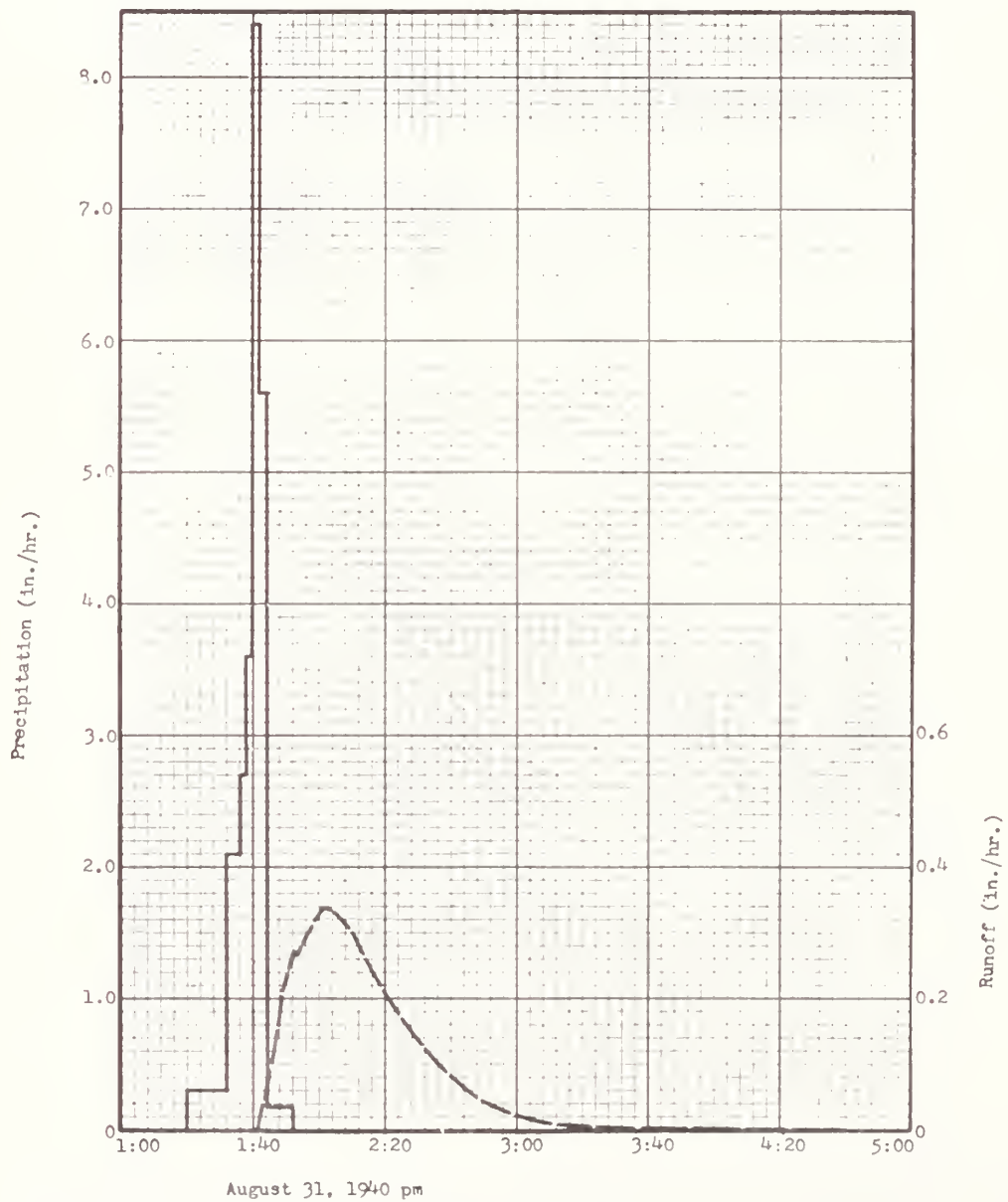
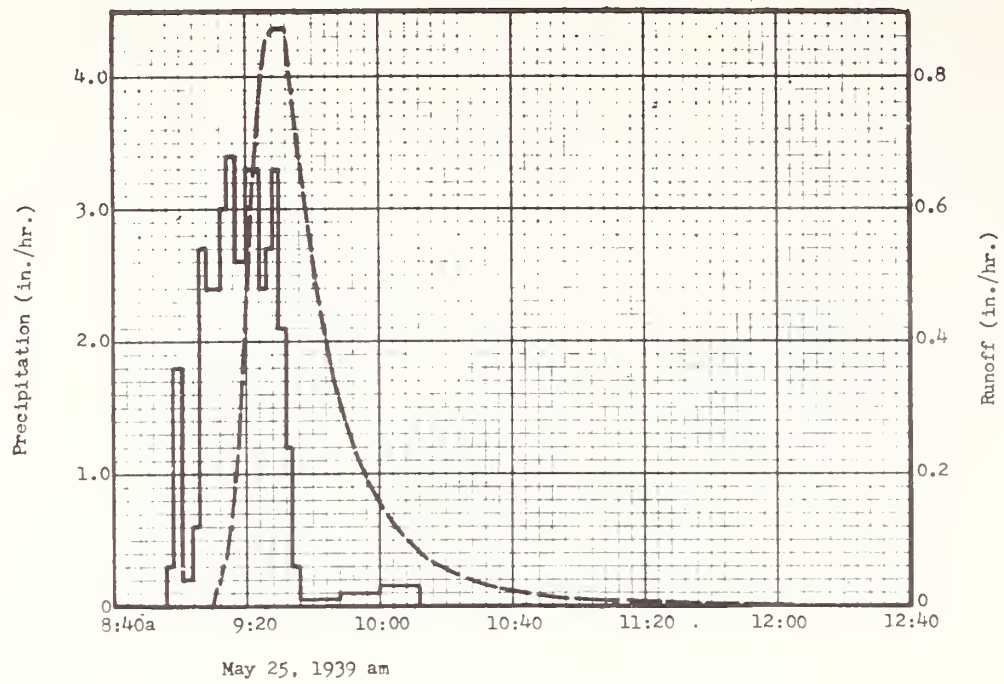
Notes: To convert runoff in in/hr to cfs multiply by 19.56.

Notes: To convert runoff in in/hr to cfs multiply by 19.56.

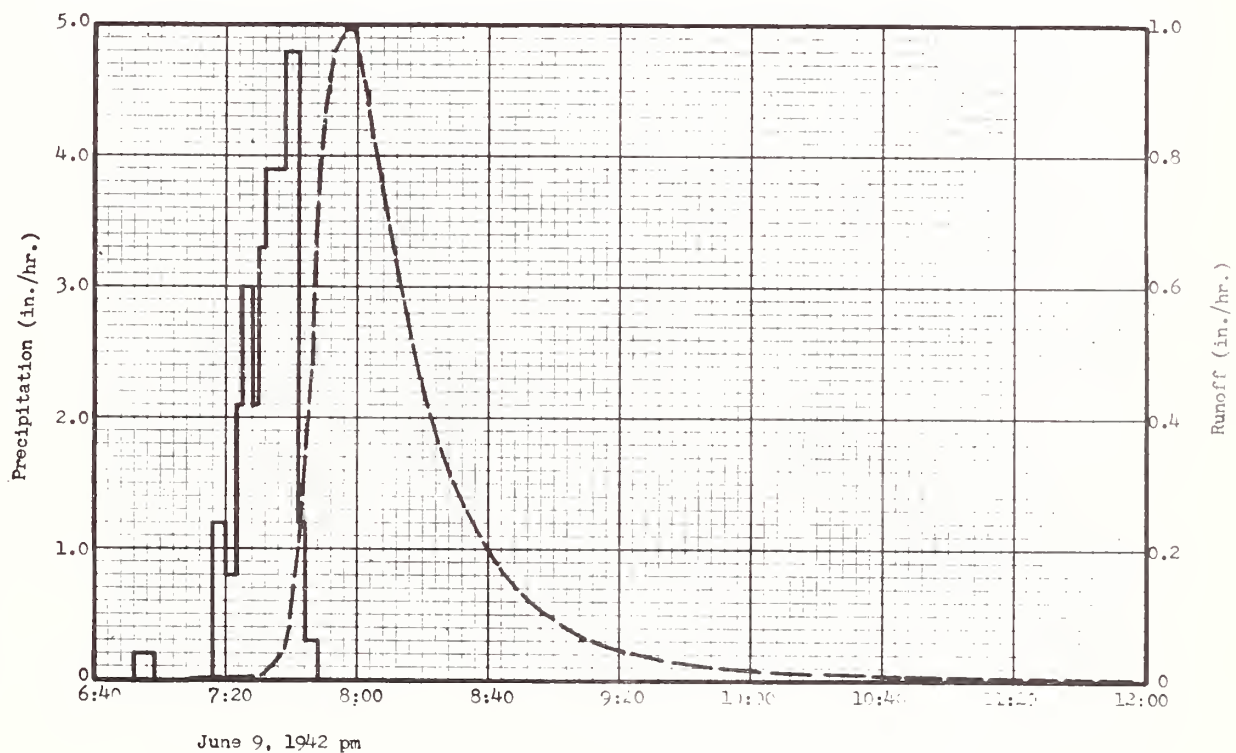
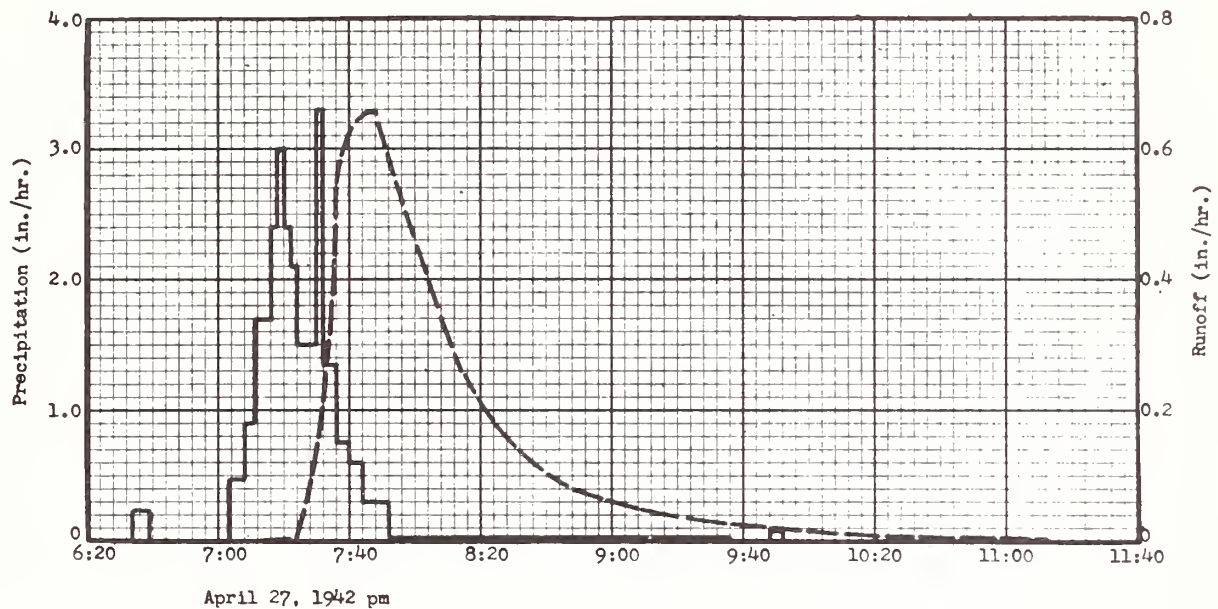


| Bentonville, Arkansas                                                                                                                |                      |                    | Watershed W-5    |                      |                  | (33.5)           |                 |                  | Area - 19.4 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of April 27, 1942                                                                                                              |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 4-6-42                                                                                                                               | 1.29                 | .001               | 4-27-42          | Raingage             | R-5              | 4-27-42          |                 |                  |                   |  |  |
| 4-7                                                                                                                                  | .36                  | 0                  | 6:34p            | 0                    | 0                | 7:13p            | 0               | 0                |                   |  |  |
| 4-8                                                                                                                                  | 1.37                 | .123               | :39              | .24                  | .02              | :24              | .0029           | T                |                   |  |  |
| 4-9                                                                                                                                  | .36                  | .007               | 7:03             | 0                    | .02              | :26              | .0390           | .001             |                   |  |  |
| 4-13                                                                                                                                 | .19                  | 0                  | :08              | .48                  | .06              | :28              | .1002           | .003             |                   |  |  |
| 4-17                                                                                                                                 | .58                  | 0                  | :11              | .80                  | .10              | :30              | .1589           | .007             |                   |  |  |
| 4-20                                                                                                                                 | .09                  | 0                  |                  |                      |                  | :33              | .2596           | .017             |                   |  |  |
| 4-21                                                                                                                                 | .10                  | 0                  | :16              | 1.70                 | .24              | :36              | .5212           | .037             |                   |  |  |
| 4-24                                                                                                                                 | 1.94                 | .076               | :18              | 2.40                 | .32              | :38              | .5979           | .056             |                   |  |  |
| 4-24                                                                                                                                 | .41                  | .166               | :20              | 3.00                 | .42              | :40              | .6336           | .076             |                   |  |  |
| 4-27 1/                                                                                                                              | .46                  | .024               | :22              | 2.40                 | .50              | :43              | .6490           | .108             |                   |  |  |
| Watershed Conditions: 32% Orchard grass and lespedeza, 60% small grain 2-6" high, 1% fallow, 5% beans, 2% orchard and orchard grass. |                      |                    | :24              | 2.10                 | .57              | :45              | .6592           | .130             |                   |  |  |
|                                                                                                                                      |                      |                    | :30              | 1.50                 | .72              | :48              | .6592           | .163             |                   |  |  |
|                                                                                                                                      |                      |                    | :32              | 3.30                 | .83              | :50              | .6132           | .184             |                   |  |  |
|                                                                                                                                      |                      |                    | :36              | 1.35                 | .92              | :53              | .5672           | .214             |                   |  |  |
|                                                                                                                                      |                      |                    | :40              | .75                  | .97              | :59              | .4681           | .266             |                   |  |  |
|                                                                                                                                      |                      |                    | :44              | .60                  | 1.01             | 8:08             | .3332           | .326             |                   |  |  |
|                                                                                                                                      |                      |                    | :52              | .30                  | 1.05             | :14              | .2626           | .356             |                   |  |  |
|                                                                                                                                      |                      |                    | 9:36             | .03                  | 1.11             | :23              | .1845           | .388             |                   |  |  |
|                                                                                                                                      |                      |                    | :48              | 0                    | 1.11             | :29              | .1497           | .405             |                   |  |  |
|                                                                                                                                      |                      |                    | :55e             | .08                  | 1.12             | :35              | .1226           | .419             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :45              | .0904           | .437             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | 9:00             | .0618           | .456             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :30              | .0280           | .476             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :44              | .0206           | .482             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | 10:24            | .0100           | .491             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | 11:09            | .0046           | .497             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :59              | .0019           | .499             |                   |  |  |
|                                                                                                                                      |                      |                    | 4-28-42          |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                      |                      |                    | 1:05a            |                      |                  | .0004            | .500            |                  |                   |  |  |
|                                                                                                                                      |                      |                    | 2:15e            |                      |                  | 0                | .501            |                  |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| Event of June 9, 1942                                                                                                                |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 5-10-42                                                                                                                              | .03                  | 0                  | 6-9-42           | Raingage             | R-5              | 6-9-42           |                 |                  |                   |  |  |
| 5-11                                                                                                                                 | .36                  | 0                  | 6:52p            | 0                    | 0                | 7:09p            | 0               | 0                |                   |  |  |
| 5-14                                                                                                                                 | .43                  | 0                  | :58              | .20                  | .02              | :15              | .0003           | T                |                   |  |  |
| 5-15                                                                                                                                 | .02                  | 0                  | 7:16             | 0                    | .02              | :26              | .0003           | T                |                   |  |  |
| 5-17                                                                                                                                 | .08                  | 0                  | :20              | 1.20                 | .10              | :30              | .0067           | T                |                   |  |  |
| 5-19                                                                                                                                 | .54                  | 0                  | :23              | .80                  | .14              | :34              | .0147           | .001             |                   |  |  |
| 5-22                                                                                                                                 | .47                  | 0                  | :25              | 2.10                 | .21              | :37              | .0402           | .002             |                   |  |  |
| 6-3                                                                                                                                  | .10                  | 0                  | :28              | 3.00                 | .36              | :40              | .1283           | .006             |                   |  |  |
| 6-4                                                                                                                                  | .15                  | 0                  | :30              | 2.10                 | .43              | :42              | .2228           | .011             |                   |  |  |
| 6-5                                                                                                                                  | .65                  | .0238              | :32              | 3.30                 | .54              | :44              | .3500           | .021             |                   |  |  |
| 6-6                                                                                                                                  | .12                  | 0                  | :38              | 3.90                 | .93              | :46              | .5059           | .035             |                   |  |  |
| 6-7                                                                                                                                  | .03                  | 0                  | :42              | 4.80                 | 1.25             | :48              | .7307           | .055             |                   |  |  |
| 6-8                                                                                                                                  | .30                  | 0                  | :44              | 1.20                 | 1.29             | :52              | .9351           | .113             |                   |  |  |
| 6-9 2/                                                                                                                               | 1.60                 | .304               | :48e             | .30                  | 1.31             | :54              | .9709           | .145             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :57              | .9964           | .194             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :58              | .9964           | .211             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | 8:00             | .9658           | .244             |                   |  |  |
|                                                                                                                                      |                      |                    |                  |                      |                  | :04              | .8636           | .304             |                   |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 19.56                                                                           |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 1/ Rainfall of April 27 preceding the event of importance.                                                                           |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 2/ Rainfall of June 9 preceding the event of importance.                                                                             |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

| Bentonville, Arkansas                                                                                                                                                                                     |                      |                    | Watershed W-5 (33.5)           |                      |                  | Area - 19.4 acres |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                     |                      |                    | Rainfall                       |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time               | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Watershed Conditions:</u> 32% Orchard grass and lespedeza, 60% small grain 2-6" high, 1% fallow, 5% beans, 2% orchard and orchard grass.                                                               |                      |                    | Event of June 9, 1942, Cont'd. |                      |                  |                   |                 |                  |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :08               | .7512           | .359             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :12               | .6285           | .405             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :20               | .4318           | .474             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :28               | .3132           | .524             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :40               | .1891           | .573             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :52               | .1226           | .604             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | 9:00              | .0894           | .618             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :12               | .0603           | .633             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :27               | .0380           | .645             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :40               | .0252           | .652             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | 10:10             | .0106           | .660             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | :44               | .0043           | .664             |
|                                                                                                                                                                                                           |                      |                    |                                |                      |                  | 11:56e            | 0               | .666             |
| Notes: To convert runoff in in/hr to cfs multiply by <b>19.56</b><br><u>1/</u> Rainfall of April 27 preceding the event of importance.<br><u>2/</u> Rainfall of June 9 preceding the event of importance. |                      |                    |                                |                      |                  |                   |                 |                  |

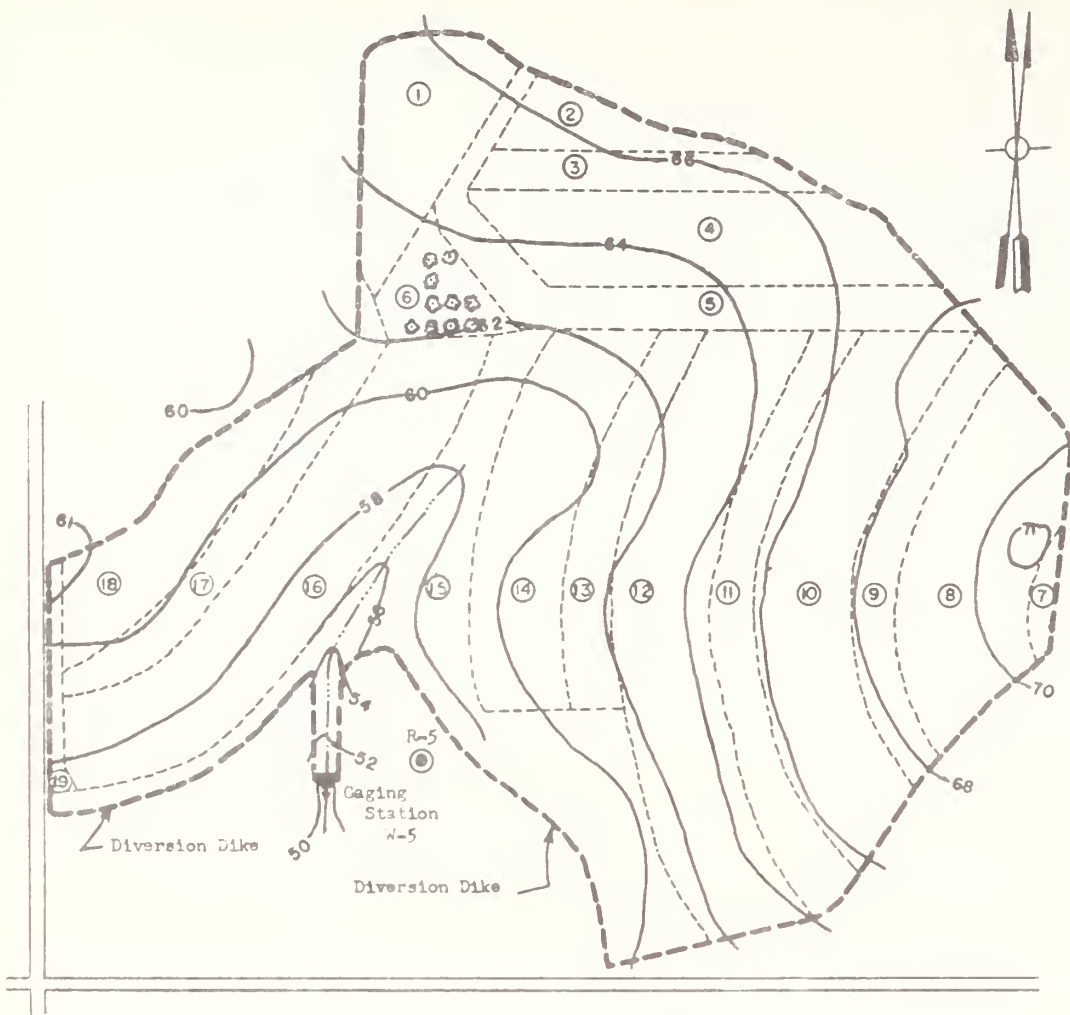


BENTONVILLE, ARKANSAS WATERSHED W-5



BENTONVILLE, ARKANSAS WATERSHED W-5





| LEGEND |                     |
|--------|---------------------|
|        | Watershed Boundary  |
|        | Strip Crop Boundary |
|        | Contours            |
|        | County Road         |
|        | Natural Waterway    |
|        | Gaging Station      |
|        | Recording Raingage  |
|        | Strip Crop Number   |
|        | Tree                |

Scale

0 50 100 200 300 feet

| CROPPING PLAN |                         |       |                           |  |
|---------------|-------------------------|-------|---------------------------|--|
| Year          | Strip No.               | Area  | Crop                      |  |
| 1939          | 1                       | .90   | Oats & Lespedeza          |  |
|               | 2-4                     | 1.66  | Main Sorghum              |  |
|               | 3-5-17-18-19            | 3.11  | Idle                      |  |
|               | 7-11-13-15              | 4.69  | Meadow                    |  |
|               | 6                       | .34   | Orchard & Orchard Grass   |  |
|               | 8-10-12-14-16           | 9.74  | Spring Oats               |  |
| 1940          | 1-17-18                 | 2.42  | Rye                       |  |
|               | 2-4                     | 1.66  | Idle                      |  |
|               | 3-5                     | 1.45  | Clover & Grass            |  |
|               | 6                       | .34   | Orchard & Orchard Grass   |  |
|               | 7-11-13-15              | 4.69  | Meadow                    |  |
|               | 8-10-14                 | 4.69  | Peas                      |  |
|               | 16                      | 2.00  | Cane                      |  |
|               | 12                      | 2.19  | Corn                      |  |
| 1942          | 1                       | .90   | Beans                     |  |
|               | 2-4-8-10-12-14-16-17-18 | 11.92 | Oats                      |  |
|               | 19                      | .14   | Idle                      |  |
|               | 6                       | .34   | Orchard & Orchard Grass   |  |
|               | 3-5-7-9-11-13-15        | 6.13  | Lespedeza & Orchard Grass |  |

BENTONVILLE, ARKANSAS

WATERSHED #5

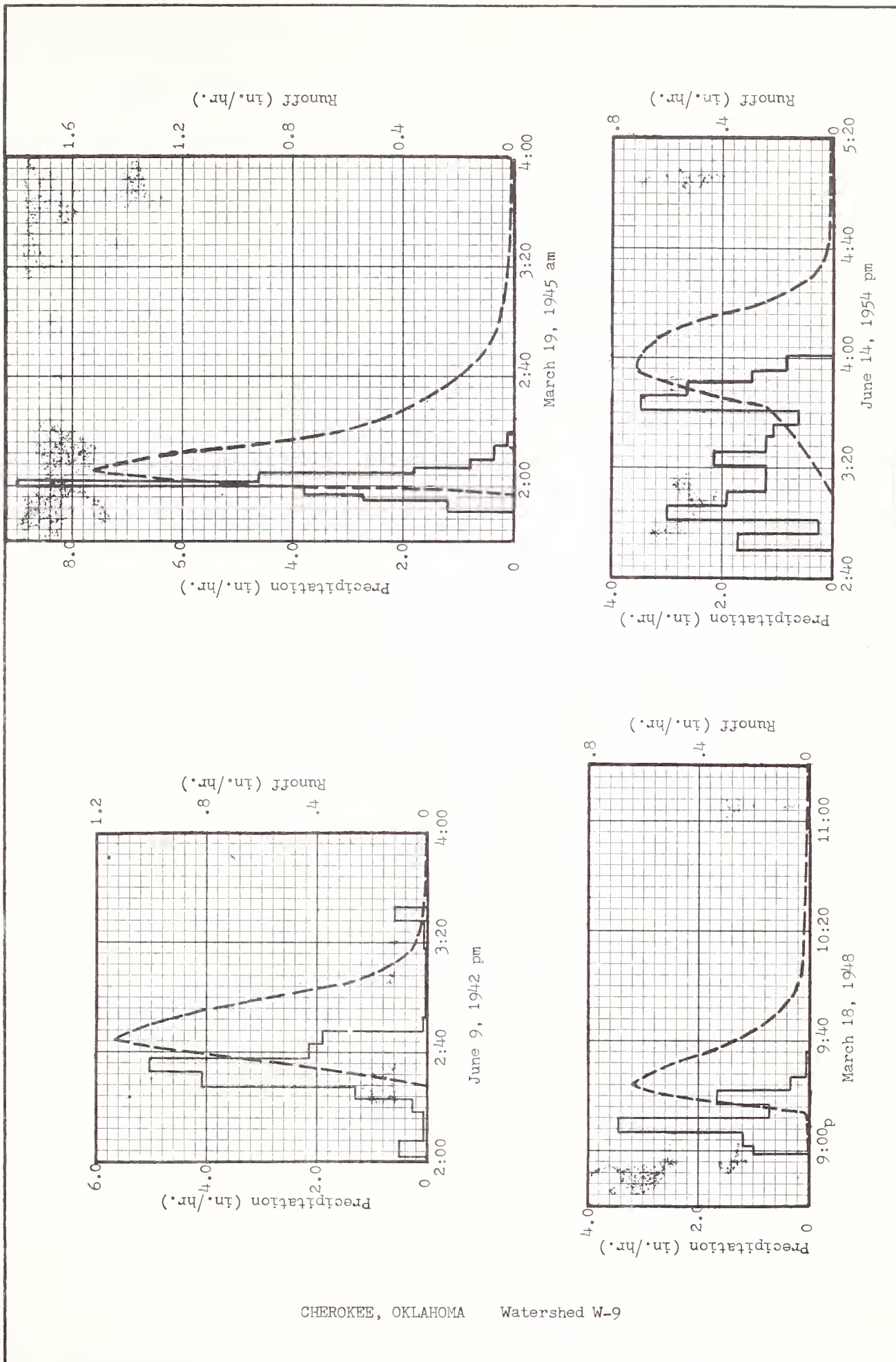
Sheet # of 6

| CHEROKEE, OKLAHOMA                                                                                   |                      |                    | Watershed W-9                  |                      |                  | (34.9)           |                 |                  | Area- 8.50acres |  |  |
|------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------------|----------------------|------------------|------------------|-----------------|------------------|-----------------|--|--|
| Antecedent conditions                                                                                |                      |                    | Rainfall                       |                      |                  | Runoff           |                 |                  |                 |  |  |
| Date                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time               | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                 |  |  |
|                                                                                                      |                      |                    | <u>Event of June 9, 1942</u>   |                      |                  |                  |                 |                  |                 |  |  |
| 5-21-42                                                                                              | 0.96                 | 0.002              | 6-9-42                         | Raingage             | 8                | 6-9-42           |                 |                  |                 |  |  |
| 6-7,8                                                                                                | 1.10                 | T                  | 2:02p                          | 0                    | 0                | 2:28p            | 0               | 0                |                 |  |  |
| <u>Watershed Conditions:</u> 100%<br>of the area in wheat in<br>hard dough stage, 38 inches<br>high. |                      |                    | :08                            | .50                  | .05              | :40              | .947            | .09              |                 |  |  |
|                                                                                                      |                      |                    | :18                            | .06                  | .06              | :45              | 1.135           | .18              |                 |  |  |
|                                                                                                      |                      |                    | :23                            | .24                  | .08              | :52              | .860            | .34              |                 |  |  |
|                                                                                                      |                      |                    | :28                            | 1.32                 | .19              | 3:00             | .576            | .40              |                 |  |  |
|                                                                                                      |                      |                    | :33                            | 4.08                 | .53              | :10              | .174            | .46              |                 |  |  |
|                                                                                                      |                      |                    | :38                            | 5.04                 | .95              | :20              | .050            | .48              |                 |  |  |
|                                                                                                      |                      |                    | :43                            | 2.16                 | 1.13             | :30              | .018            | .48              |                 |  |  |
|                                                                                                      |                      |                    | :48                            | 1.92                 | 1.29             | 4:00             | .005            | .49              |                 |  |  |
|                                                                                                      |                      |                    | :53                            | .12                  | 1.30             | :30              | .001            | .49              |                 |  |  |
|                                                                                                      |                      |                    | 3:18                           | .02                  | 1.31             | 6:00e            | 0               | .49              |                 |  |  |
|                                                                                                      |                      |                    | :28                            | .06                  | 1.32             |                  |                 |                  |                 |  |  |
|                                                                                                      |                      |                    | :33e                           | .60                  | 1.34             |                  |                 |                  |                 |  |  |
|                                                                                                      |                      |                    | <u>Event of March 19, 1945</u> |                      |                  |                  |                 |                  |                 |  |  |
| 3-14-45                                                                                              | 1.37                 | 0.081              | 3-19-45                        | Raingage             | 8                | 3-19-45          |                 |                  |                 |  |  |
| <u>Watershed Conditions:</u> 100%<br>of the area in winter wheat.                                    |                      |                    | 1:51a                          | 0                    | 0                | 1:51a            | 0               | 0                |                 |  |  |
|                                                                                                      |                      |                    | :55                            | 1.20                 | .08              | :58              | .002            | 0                |                 |  |  |
|                                                                                                      |                      |                    | :57                            | 2.70                 | .17              | :59              | .355            | 0                |                 |  |  |
|                                                                                                      |                      |                    | 2:00                           | 3.80                 | .36              | 2:01             | 1.026           | .03              |                 |  |  |
|                                                                                                      |                      |                    | :02                            | 9.00                 | .66              | :02              | 1.225           | .05              |                 |  |  |
|                                                                                                      |                      |                    | :05                            | 4.60                 | .89              | :03              | 1.307           | .07              |                 |  |  |
|                                                                                                      |                      |                    | :07                            | 1.80                 | .93              | :04              | 1.445           | .09              |                 |  |  |
|                                                                                                      |                      |                    | :10                            | .80                  | .97              | :06              | 1.517           | .14              |                 |  |  |
|                                                                                                      |                      |                    | :15                            | .36                  | 1.00             | :10              | 1.307           | .24              |                 |  |  |
|                                                                                                      |                      |                    | :20                            | .12                  | 1.01             | :17              | .825            | .35              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | :31              | .355            | .48              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | :46              | .130            | .54              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | 3:00             | .050            | .56              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | 4:00             | .010            | .57              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | :54              | .004            | .58              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | 5:14             | .002            | .58              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | 8:30             | 0               | .58              |                 |  |  |
|                                                                                                      |                      |                    | <u>Event of March 18, 1948</u> |                      |                  |                  |                 |                  |                 |  |  |
| 2-26-48                                                                                              | 2.09                 | 0.595              | 3-18-48                        | Raingage             | 8                | 3-18-48          |                 |                  |                 |  |  |
| 3-1                                                                                                  | .63                  | .111               | 8:59p                          | 0                    | 0                | 9:00p            | 0               | 0                |                 |  |  |
| <u>Watershed Conditions:</u> 100%<br>of the area in winter wheat.                                    |                      |                    | 9:02                           | 1.00                 | .05              | :12              | .004            | 0                |                 |  |  |
|                                                                                                      |                      |                    | :07                            | 1.20                 | .15              | :14              | .015            | 0                |                 |  |  |
|                                                                                                      |                      |                    | :12                            | 3.48                 | .44              | :16              | .194            | 0                |                 |  |  |
|                                                                                                      |                      |                    | :17                            | .72                  | .50              | :18              | .326            | .01              |                 |  |  |
|                                                                                                      |                      |                    | :22                            | 1.68                 | .64              | :20              | .481            | .03              |                 |  |  |
|                                                                                                      |                      |                    | :27                            | .36                  | .67              | :22              | .581            | .04              |                 |  |  |
|                                                                                                      |                      |                    | :37e                           | .06                  | .68              | :25              | .640            | .07              |                 |  |  |
|                                                                                                      |                      |                    |                                |                      |                  | :28              | .591            | .10              |                 |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 8.571.                                          |                      |                    |                                |                      |                  |                  |                 |                  |                 |  |  |

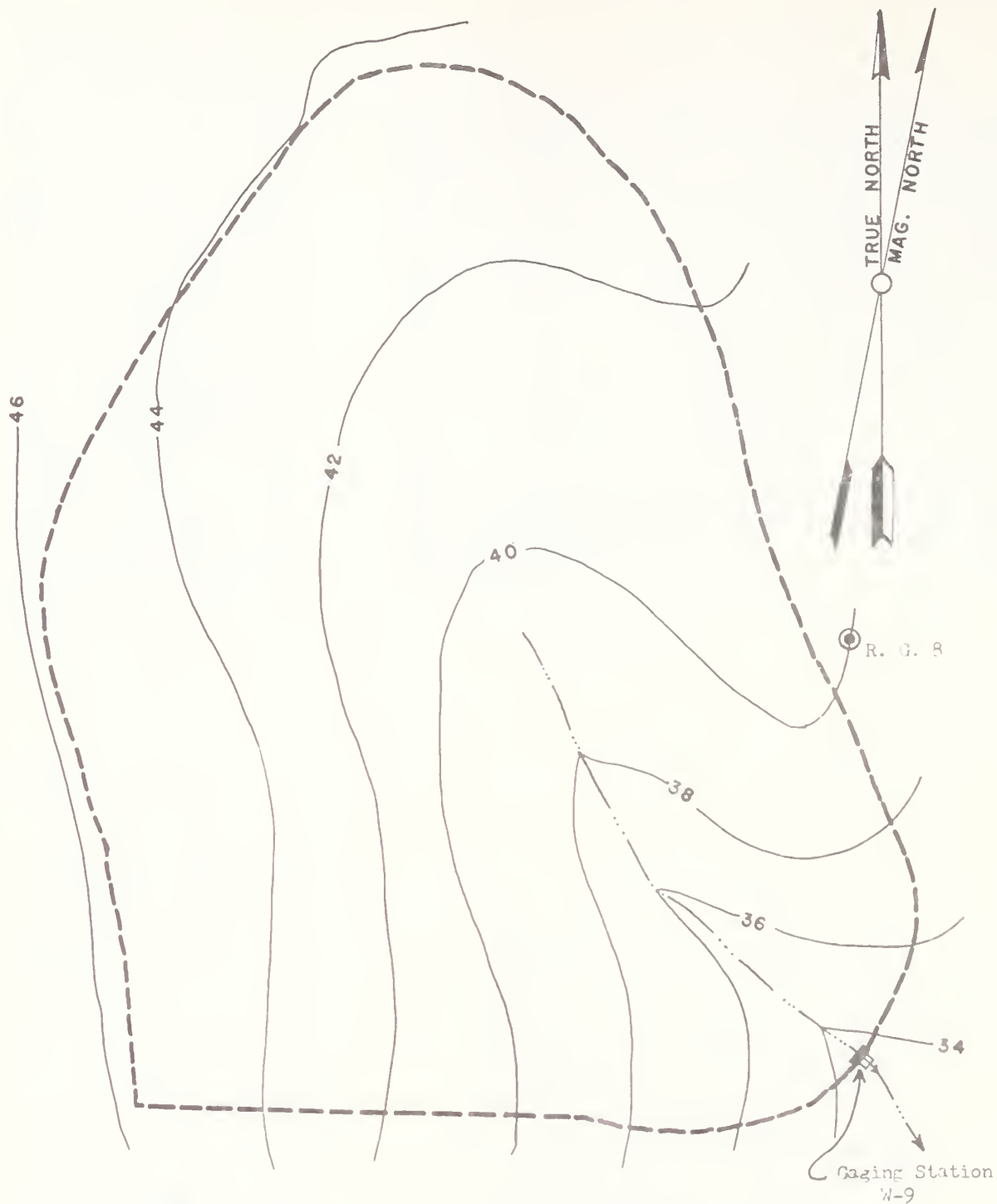
| Antecedent conditions                   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-----------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of March 18, 1948, Cont'd.</u> |                      |                    |                  |                      |                  |                  |                 |                  |
|                                         |                      |                    |                  |                      |                  | :34              | 0.414           | 0.16             |
|                                         |                      |                    |                  |                      |                  | :40              | .273            | .19              |
|                                         |                      |                    |                  |                      |                  | :50              | .106            | .23              |
|                                         |                      |                    |                  |                      |                  | 10:00            | .050            | .24              |
|                                         |                      |                    |                  |                      |                  | :06              | .025            | .24              |
|                                         |                      |                    |                  |                      |                  | :34              | .012            | .25              |
|                                         |                      |                    |                  |                      |                  | :57              | .006            | .25              |
|                                         |                      |                    |                  |                      |                  | 11:12            | .002            | .25              |
|                                         |                      |                    |                  |                      |                  | :59p             | .001            | .25              |
|                                         |                      |                    |                  |                      |                  | 3-19-48          |                 |                  |
|                                         |                      |                    |                  |                      |                  | 1:50a            | 0               | .25              |
| <u>Event of June 14, 1954</u>           |                      |                    |                  |                      |                  |                  |                 |                  |
| 5-19-54                                 | 0.98                 | 0                  | 6-14-54          | Raingage             | 8                | 6-14-54          |                 |                  |
| 5-23                                    | 4.52                 | 1.15               | 2:50p            | 0                    | 0                | 3:10p            | 0               | 0                |
|                                         |                      |                    | :56              | 1.70                 | .17              | :14              | .018            | 0                |
|                                         |                      |                    | 3:01             | .24                  | .19              | :23              | .079            | .01              |
|                                         |                      |                    | :06              | 3.00                 | .44              | :30              | .121            | .02              |
|                                         |                      |                    | :11              | 1.92                 | .70              | :34              | .155            | .03              |
|                                         |                      |                    | :21              | 1.20                 | .90              | :42              | .226            | .05              |
|                                         |                      |                    | :26              | 2.16                 | 1.09             | :44              | .286            | .06              |
|                                         |                      |                    | :31              | 1.20                 | 1.19             | :45              | .355            | .07              |
|                                         |                      |                    | :36              | 1.08                 | 1.28             | :48              | .471            | .09              |
|                                         |                      |                    | :41              | .60                  | 1.33             | :50              | .561            | .11              |
|                                         |                      |                    | :46              | 3.48                 | 1.62             | :53              | .661            | .14              |
|                                         |                      |                    | :51              | 2.64                 | 1.84             | :57              | .713            | .18              |
|                                         |                      |                    | :56              | 1.44                 | 1.96             | 4:07             | .650            | .30              |
|                                         |                      |                    | 4:01e            | .84                  | 2.03             | :12              | .534            | .35              |
|                                         |                      |                    |                  |                      |                  | :17              | .390            | .38              |
|                                         |                      |                    |                  |                      |                  | :20              | .286            | .40              |
|                                         |                      |                    |                  |                      |                  | :26              | .174            | .42              |
|                                         |                      |                    |                  |                      |                  | :32              | .061            | .44              |
|                                         |                      |                    |                  |                      |                  | :42              | .018            | .45              |
|                                         |                      |                    |                  |                      |                  | 5:03             | .008            | .45              |
|                                         |                      |                    |                  |                      |                  | :28              | .001            | .45              |
|                                         |                      |                    |                  |                      |                  | 6:14e            | 0               | .45              |

Watershed Conditions: 100%  
of the area in winter wheat,  
mature but not harvested.



Notes: To convert runoff in in/hr to cfs multiply by 8.571.







# LEGEND

- Watershed Boundary
- ..... Natural Waterway
- 40 — Contours
-  Gaging Station
-  Recording Rain gauge

Scale in feet



CHEROKEE, OKLAHOMA

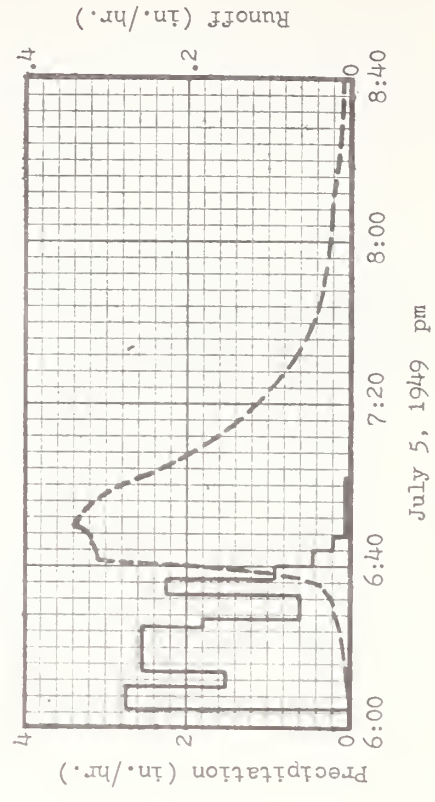
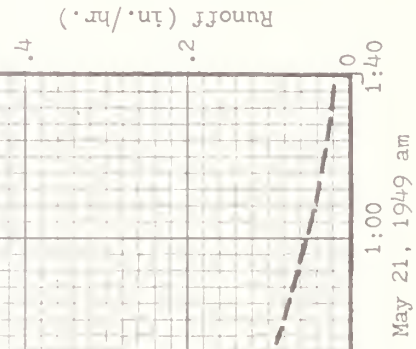
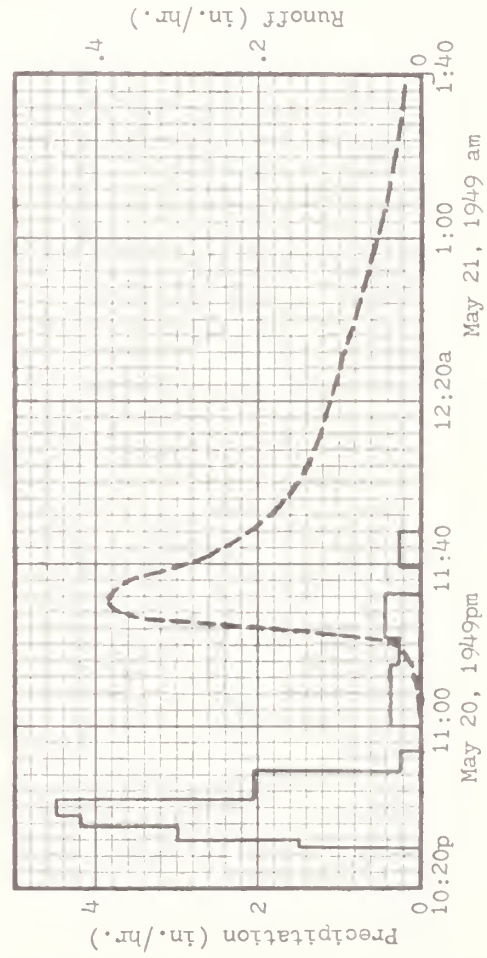
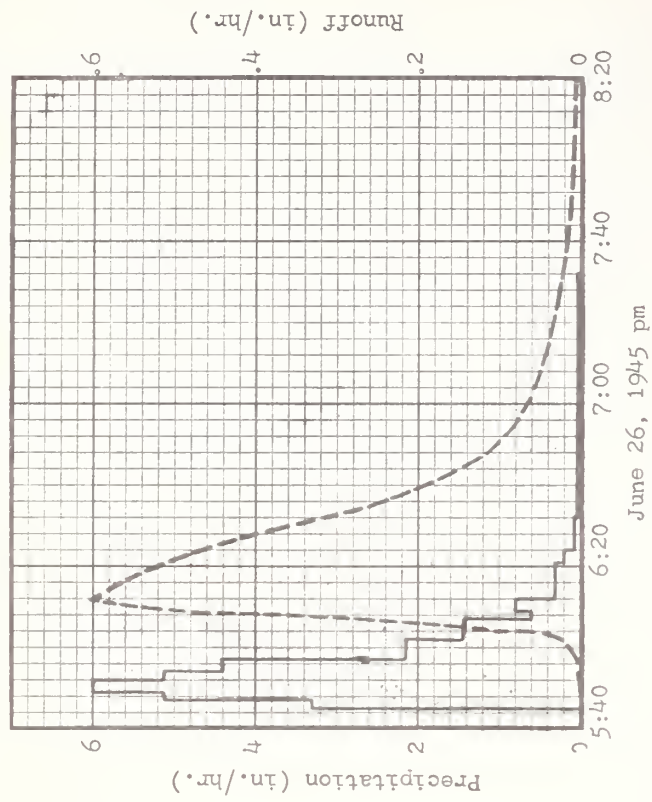
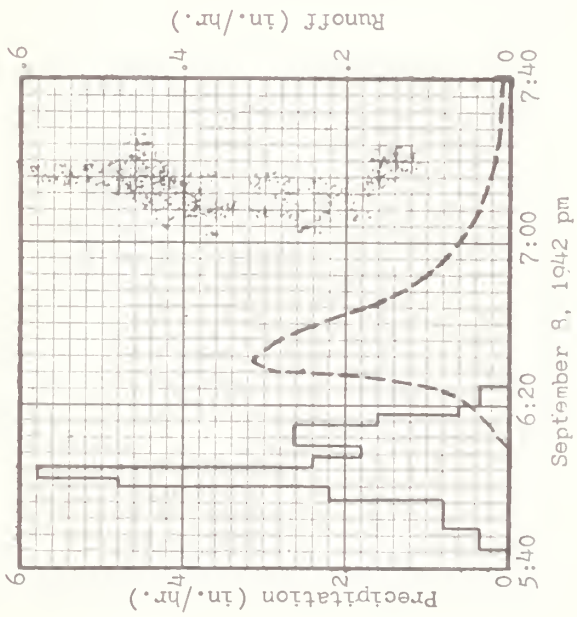
Watershed W-9

| GUTHRIE, OKLAHOMA                                                                     |                      |                    | Watershed W-VI         |                      |                  | (35.11)          |                 |                  | Area - 94.8 acres |  |  |
|---------------------------------------------------------------------------------------|----------------------|--------------------|------------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                 |                      |                    | Rainfall               |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time       | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of September 8, 1942                                                            |                      |                    |                        |                      |                  |                  |                 |                  |                   |  |  |
| 8-8-42                                                                                | 0.25                 | 0                  | 9-8-42                 | Raingage             | 12               | 9-8-42           |                 |                  |                   |  |  |
| 8-10                                                                                  | 1.30                 | .034               | 5:45p                  | 0                    | 0                | 6:10p            | 0               | 0                |                   |  |  |
| 8-11                                                                                  | .02                  | 0                  | :50                    | .36                  | .03              | :14              | .0203           | .001             |                   |  |  |
| 8-13                                                                                  | .86                  | 0                  | :57                    | .80                  | .07              | :17              | .0361           | .002             |                   |  |  |
| 8-14                                                                                  | .45                  | 0                  | 6:00                   | 2.20                 | .18              | :22              | .0542           | .006             |                   |  |  |
| 8-22                                                                                  | .08                  | 0                  | :02                    | 4.80                 | .34              | :26              | .1407           | .012             |                   |  |  |
| 8-25                                                                                  | 1.23                 | 0                  | :05                    | 5.80                 | .63              | :28              | .2784           | .019             |                   |  |  |
| 9-2                                                                                   | .07                  | 0                  | :07                    | 2.40                 | .71              | :31              | .3190           | .034             |                   |  |  |
| 9-3                                                                                   | 1.14                 | 0                  | :10                    | 1.80                 | .82              | :36              | .2784           | .059             |                   |  |  |
| 9-6                                                                                   | .23                  | 0                  | :15                    | 2.64                 | 1.04             | :44              | .1803           | .090             |                   |  |  |
| Watershed Conditions: 100%<br>native grass pasture with<br>controlled cattle grazing. |                      |                    | :18                    | 1.60                 | 1.12             | :52              | .1069           | .109             |                   |  |  |
|                                                                                       |                      |                    | :20                    | .60                  | 1.14             | 7:00             | .0600           | .120             |                   |  |  |
|                                                                                       |                      |                    | :25e                   | .36                  | 1.17             | :10              | .0361           | .138             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | :20              | .0203           | .133             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | :30              | .0120           | .135             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | :50              | .0044           | .138             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | 8:50             | .0013           | .140             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | 9:30             | T               | .141             |                   |  |  |
|                                                                                       |                      |                    |                        |                      |                  | 10.20e           | 0               | .141             |                   |  |  |
|                                                                                       |                      |                    | Event of June 26, 1945 |                      |                  |                  |                 |                  |                   |  |  |
| 6-3-45                                                                                | .18                  | 0                  | 6-26-45                | Raingage             | 13               | 6-26-45          |                 |                  |                   |  |  |
| 6-6                                                                                   | .06                  | 0                  | 5:45a                  | 0                    | 0                | 5:49a            | 0               | 0                |                   |  |  |
| 6-8                                                                                   | .82                  | 0                  | :47                    | 3.30                 | .11              | :55              | .0022           | T                |                   |  |  |
| 6-10                                                                                  | 3.53                 | .097               | :49                    | 5.10                 | .28              | :59              | .0098           | T                |                   |  |  |
| 6-11                                                                                  | .09                  | T                  | :52                    | 6.00                 | .58              | 6:03             | .0272           | .002             |                   |  |  |
| 6-15                                                                                  | 1.14                 | .074               | :54                    | 5.10                 | .75              | :04              | .1069           | .003             |                   |  |  |
| 6-16                                                                                  | .08                  | 0                  | :57                    | 4.40                 | .97              | :06              | .1978           | .008             |                   |  |  |
| 6-20                                                                                  | .14                  | 0                  | 6:02                   | 2.16                 | 1.15             | :08              | .3502           | .016             |                   |  |  |
| 6-21                                                                                  | 2.49                 | .784               | :07                    | 1.44                 | 1.27             | :10              | .5592           | .031             |                   |  |  |
| Watershed Conditions: 100%<br>native grass pasture with<br>controlled cattle grazing. |                      |                    | :09                    | .60                  | 1.29             | :12              | .6028           | .050             |                   |  |  |
|                                                                                       |                      |                    | :12                    | .80                  | 1.33             | :17              | .5592           | .099             |                   |  |  |
|                                                                                       |                      |                    | :21                    | .33                  | 1.38             | :23              | .4777           | .151             |                   |  |  |
|                                                                                       |                      |                    | :24                    | .20                  | 1.39             | :28              | .4039           | .187             |                   |  |  |
|                                                                                       |                      |                    | :32                    | .08                  | 1.40             | :34              | .2784           | .221             |                   |  |  |
|                                                                                       |                      |                    | 7:32                   | .02                  | 1.42             | :40              | .1889           | .244             |                   |  |  |
|                                                                                       |                      |                    | 6-26-45                | Raingage             | 12               | :50              | .1069           | .268             |                   |  |  |
|                                                                                       |                      |                    | 5:46a                  | 0                    | 0                | 7:06             | .0542           | .288             |                   |  |  |
|                                                                                       |                      |                    | :50                    | 3.30                 | .22              | :31              | .0225           | .304             |                   |  |  |
|                                                                                       |                      |                    | :54                    | 3.75                 | .47              | :46              | .0129           | .308             |                   |  |  |
|                                                                                       |                      |                    | :57                    | 4.20                 | .68              | 8:10             | .0062           | .312             |                   |  |  |
|                                                                                       |                      |                    | :59                    | 2.40                 | .76              | :36              | .0029           | .314             |                   |  |  |
|                                                                                       |                      |                    | 6:04                   | 1.68                 | .90              | 9:04             | .0013           | .315             |                   |  |  |
|                                                                                       |                      |                    | :08                    | 1.35                 | .99              | 3:10p            | 0               | .315             |                   |  |  |
|                                                                                       |                      |                    | :14                    | .70                  | 1.06             |                  |                 |                  |                   |  |  |
|                                                                                       |                      |                    | :31                    | .21                  | 1.12             |                  |                 |                  |                   |  |  |
|                                                                                       |                      |                    | 7:09e                  | .02                  | 1.13             |                  |                 |                  |                   |  |  |
|                                                                                       |                      |                    | Weighted               | Average 1/           | 1.31             |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 95.59.                           |                      |                    |                        |                      |                  |                  |                 |                  |                   |  |  |
| 1/ Thiessen Method.                                                                   |                      |                    |                        |                      |                  |                  |                 |                  |                   |  |  |

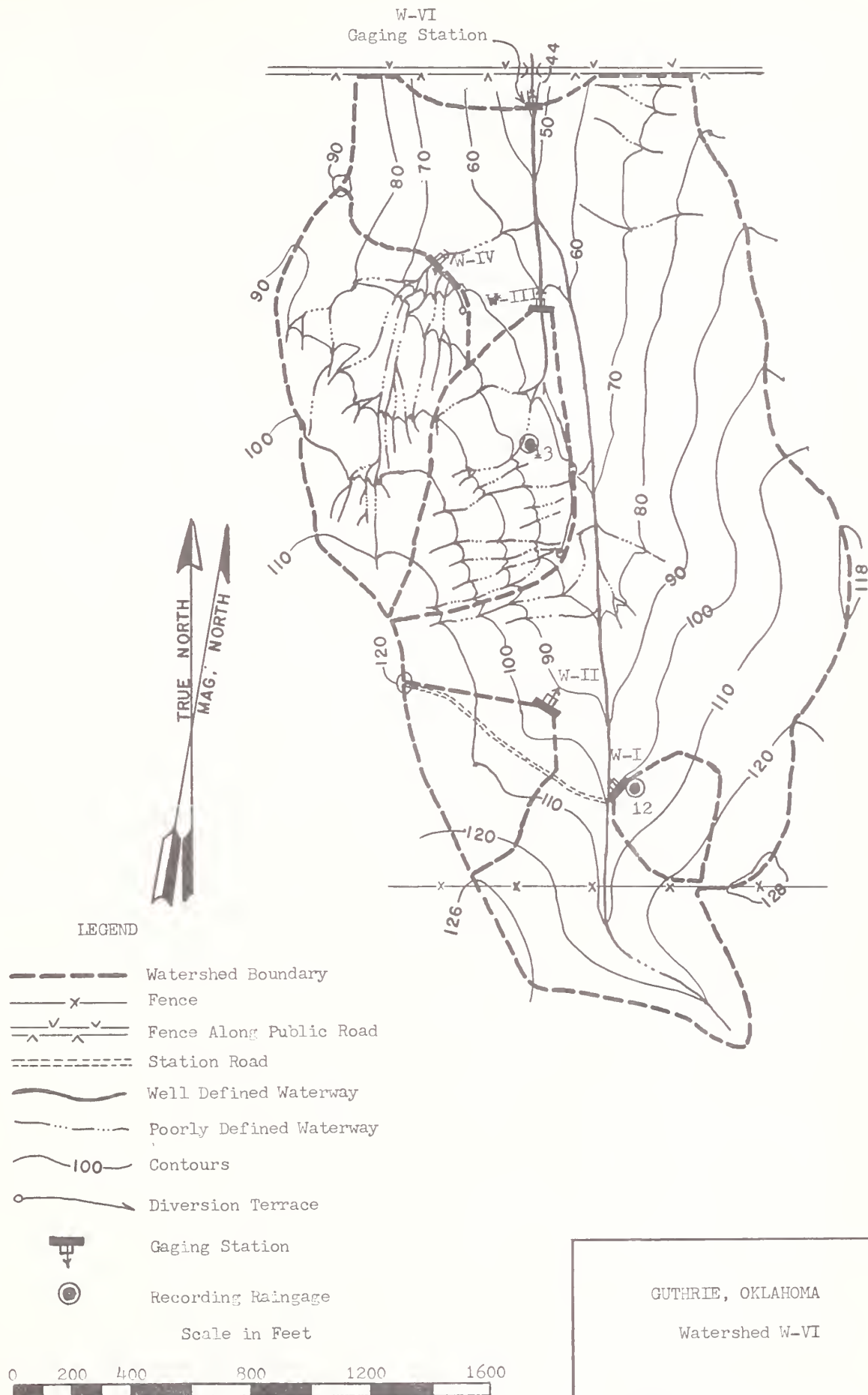
| GUTHRIE, OKLAHOMA                                                               |                      |                    | Watershed W-VI                 |                      |                  | (35.11)          |                 |                  | Area - 94.8 acres |  |  |
|---------------------------------------------------------------------------------|----------------------|--------------------|--------------------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                           |                      |                    | Rainfall                       |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                            | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time               | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of May 20, 1949                                                           |                      |                    |                                |                      |                  |                  |                 |                  |                   |  |  |
| 4-27-49                                                                         | 0.63                 | 0                  | 5-20-49                        | Raingage             | 13               | 5-20-49          |                 |                  |                   |  |  |
| 5-1                                                                             | .83                  | .001               | 10:30p                         | 0                    | 0                | 11:02p           | 0               | 0                |                   |  |  |
| 5-6                                                                             | .60                  | 0                  | :32                            | 1.50                 | .05              | :11              | .0022           | T                |                   |  |  |
| 5-14                                                                            | .41                  | 0                  | :35                            | 3.00                 | .20              | :15              | .0105           | T                |                   |  |  |
| 5-15                                                                            | .26                  | 0                  | :38                            | 4.20                 | .41              | :20              | .0225           | .002             |                   |  |  |
| 5-16                                                                            | .12                  | 0                  | :42                            | 4.50                 | .71              | :22              | .0886           | .004             |                   |  |  |
| 5-17                                                                            | 1.80                 | .132               | :49                            | 2.06                 | .95              | :24              | .1407           | .007             |                   |  |  |
| 5-18                                                                            | 5.94                 | 3.391              | :54                            | .24                  | .97              | :26              | .3251           | .015             |                   |  |  |
| 5-19                                                                            | .34                  | .010               | 11:00                          | 0                    | .97              | :28              | .3765           | .027             |                   |  |  |
|                                                                                 |                      |                    | :15                            | .36                  | 1.06             | :30              | .3831           | .041             |                   |  |  |
|                                                                                 |                      |                    | :22                            | .26                  | 1.09             | :34              | .3765           | .065             |                   |  |  |
|                                                                                 |                      |                    | :33                            | .44                  | 1.17             | :37              | .3375           | .083             |                   |  |  |
|                                                                                 |                      |                    | :39                            | 0                    | 1.17             | :41              | .2840           | .104             |                   |  |  |
|                                                                                 |                      |                    | :48e                           | .27                  | 1.21             | :46              | .2311           | .125             |                   |  |  |
|                                                                                 |                      |                    |                                |                      |                  | :52              | .1846           | .146             |                   |  |  |
| Watershed Conditions: 100% native grass pasture with controlled cattle grazing. |                      |                    |                                |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                 |                      |                    | 5-20-49                        | Raingage             | 12               | :59              | .1570           | .167             |                   |  |  |
|                                                                                 |                      |                    | 11:04p                         | 0                    | 0                | 5-21-49          |                 |                  |                   |  |  |
|                                                                                 |                      |                    | :14                            | 3.48                 | .58              | 12:04a           | .1443           | .179             |                   |  |  |
|                                                                                 |                      |                    | :16                            | 5.10                 | .75              | :14              | .1199           | .201             |                   |  |  |
|                                                                                 |                      |                    | :20                            | .75                  | .80              | :34              | .0915           | .236             |                   |  |  |
|                                                                                 |                      |                    | :42                            | .22                  | .88              | :50              | .0646           | .257             |                   |  |  |
|                                                                                 |                      |                    | :45                            | 1.40                 | .95              | 1:10             | .0409           | .274             |                   |  |  |
|                                                                                 |                      |                    | :56                            | .22                  | .99              | :30              | .0258           | .285             |                   |  |  |
|                                                                                 |                      |                    | 5-21-49                        |                      |                  | 2:00             | .0145           | .295             |                   |  |  |
|                                                                                 |                      |                    | 12:01a                         | .60                  | 1.04             | :30              | .0086           | .301             |                   |  |  |
|                                                                                 |                      |                    | :10                            | .13                  | 1.06             | 3:10             | .0048           | .305             |                   |  |  |
|                                                                                 |                      |                    | :13                            | .60                  | 1.09             | :35              | .0036           | .307             |                   |  |  |
|                                                                                 |                      |                    | :25e                           | .05                  | 1.10             | 5:00a            | .0013           | .310             |                   |  |  |
|                                                                                 |                      |                    |                                |                      |                  | 5:02p            | 0               | .313             |                   |  |  |
|                                                                                 |                      |                    | Weighted Average $\frac{1}{1}$ |                      |                  | 1.17             |                 |                  |                   |  |  |
| Event of July 5, 1949                                                           |                      |                    |                                |                      |                  |                  |                 |                  |                   |  |  |
| 6-9-49                                                                          | 0.98                 | 0.029              | 7-5-49                         | Raingage             | 13               | 7-5-49           |                 |                  |                   |  |  |
| 6-10                                                                            | .64                  | .043               | 6:05p                          | 0                    | 0                | 6:08p            | 0               | 0                |                   |  |  |
| 6-11                                                                            | .12                  | 0                  | :10                            | 2.76                 | .23              | :20              | .0044           | T                |                   |  |  |
| 6-12                                                                            | .77                  | .090               | :14                            | 1.50                 | .33              | :26              | .0129           | .001             |                   |  |  |
| 6-19                                                                            | .06                  | 0                  | :25                            | 2.56                 | .80              | :34              | .0247           | .004             |                   |  |  |
| 6-24                                                                            | .60                  | .002               | :27                            | 1.80                 | .86              | :35              | .0314           | .004             |                   |  |  |
| 6-25                                                                            | .07                  | 0                  | :33                            | .60                  | .92              | :38              | .0946           | .007             |                   |  |  |
| 6-28                                                                            | 1.19                 | .046               | :37                            | 2.25                 | 1.07             | :40              | .2261           | .012             |                   |  |  |
| 7-4                                                                             | 1.31                 | .094               | :40                            | .90                  | 1.14             | :42              | .3070           | .021             |                   |  |  |
|                                                                                 |                      |                    | :44                            | .45                  | 1.17             | :46              | .3130           | .042             |                   |  |  |
|                                                                                 |                      |                    | :47                            | .20                  | 1.18             | :51              | .3375           | .069             |                   |  |  |
|                                                                                 |                      |                    | 7:02                           | .04                  | 1.19             | :55              | .3251           | .091             |                   |  |  |
|                                                                                 |                      |                    |                                |                      |                  | 7:00             | .2784           | .116             |                   |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 95.59.                     |                      |                    |                                |                      |                  |                  |                 |                  |                   |  |  |
| $\frac{1}{1}$ Thiessen Method.                                                  |                      |                    |                                |                      |                  |                  |                 |                  |                   |  |  |

| GUTHRIE, OKLAHOMA                                                                          |                   |                 | Watershed W-VI (35.11)        |                    |               | Area- 94.8 acres |              |               |
|--------------------------------------------------------------------------------------------|-------------------|-----------------|-------------------------------|--------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                      |                   |                 | Rainfall                      |                    |               | Runoff           |              |               |
| Date                                                                                       | Rainfall (inches) | Runoff (inches) | Date and time                 | Intensity (in/hr)  | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Watershed Conditions: 100% native grass pasture with controlled cattle grazing.            |                   |                 | Event of July 5, 1949 Cont'd. |                    |               |                  |              |               |
|                                                                                            |                   |                 | 7-5-49                        |                    |               |                  |              |               |
|                                                                                            |                   |                 | Raingage                      | 12                 |               | 7:05p            | 0.2261       | 0.137         |
|                                                                                            |                   |                 | 6:05p                         | 0                  | 0             | :15              | .1481        | .168          |
|                                                                                            |                   |                 | :11                           | 1.90               | .19           | :30              | .0721        | .194          |
|                                                                                            |                   |                 | :16                           | 2.40               | .39           | :40              | .0481        | .204          |
|                                                                                            |                   |                 | :23                           | 2.74               | .71           | 8:00             | .0225        | .215          |
|                                                                                            |                   |                 | :31                           | .60                | .79           | :30              | .0073        | .222          |
|                                                                                            |                   |                 | :39                           | 1.88               | 1.06          | 9:20             | .0022        | .226          |
|                                                                                            |                   |                 | :44                           | .48                | 1.10          | 11:59            | .0006        | .229          |
|                                                                                            |                   |                 | 7:05e                         | .06                | 1.12          | 7-6-49           |              |               |
|                                                                                            |                   |                 |                               |                    |               | 6:12p            | 0            | .234          |
|                                                                                            |                   |                 | Weighted                      | Average <u>1</u> / | 1.16          |                  |              |               |
|                                                                                            |                   |                 |                               |                    |               |                  |              |               |
| Notes: To convert runoff in in/hr to cfs multiply by 95.59.<br><u>1</u> / Thiessen Method. |                   |                 |                               |                    |               |                  |              |               |





GUTHRIE, OKLAHOMA Watershed W-VI





| Stillwater, Oklahoma, Watershed W-3 (37.2) Area - 92.0 acres                                                                                                                                                |                      |                    |                  |                      |                  |                  |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                       |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                                                                                                        | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of May 23, 1955</u>                                                                                                                                                                                |                      |                    |                  |                      |                  |                  |                 |                  |
| 4-24-55                                                                                                                                                                                                     | 0.09                 | 0                  | 5-23-55          | Raingage R-3         |                  | 5-23-59          |                 |                  |
| 5-1                                                                                                                                                                                                         | 0.04                 | 0                  | 4:51p            | 0                    | 0                | 5:03p            | 0               | 0                |
| 5-5                                                                                                                                                                                                         | 0.20                 | 0                  | 4:56             | 1.20                 | 0.10             | 5:08             | 0.006           | 0                |
| 5-7                                                                                                                                                                                                         | 0.24                 | 0                  | 5:01             | 1.20                 | 0.20             | 5:12             | 0.014           | 0.001            |
| 5-8                                                                                                                                                                                                         | 2.98                 | 0.538              | 5:06             | 1.92                 | 0.36             | 5:15             | 0.033           | 0.002            |
| 5-9                                                                                                                                                                                                         | 0.93                 | 0.792              | 5:11             | 3.36                 | 0.64             | 5:20             | 0.062           | 0.006            |
| 5-11                                                                                                                                                                                                        | 1.21                 | 0.734              | 5:16             | 1.08                 | 0.73             | 5:24             | 0.116           | 0.012            |
| 5-18                                                                                                                                                                                                        | 2.85                 | 1.817              | 5:21             | 1.80                 | 0.88             | 5:28             | 0.250           | 0.024            |
| 5-19                                                                                                                                                                                                        | 0.02                 | 0                  | 5:26             | 2.88                 | 1.12             | 5:34             | 0.568           | 0.065            |
| 5-20                                                                                                                                                                                                        | 1.69                 | 1.516              | 5:31             | 1.08                 | 1.21             | 5:38             | 0.761           | 0.109            |
| <u>Watershed Conditions:</u> All of the area was in native grass pasture in fair to poor condition.                                                                                                         |                      |                    | 5:36             | 0.72                 | 1.27             | 5:42             | 0.894           | 0.164            |
|                                                                                                                                                                                                             |                      |                    | 5:41             | 0.24                 | 1.29             | 5:46             | 0.936           | 0.226            |
|                                                                                                                                                                                                             |                      |                    | 5:46             | 0.12                 | 1.30             | 5:49             | 0.921           | 0.272            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 5:52             | 0.882           | 0.316            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 5:56             | 0.800           | 0.373            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:00             | 0.700           | 0.423            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:04             | 0.598           | 0.465            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:09             | 0.490           | 0.511            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:14             | 0.402           | 0.548            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:19             | 0.325           | 0.579            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:24             | 0.272           | 0.604            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:30             | 0.222           | 0.628            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:36             | 0.190           | 0.649            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:42             | 0.161           | 0.666            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 6:50             | 0.125           | 0.686            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:00             | 0.091           | 0.702            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:10             | 0.072           | 0.718            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:20             | 0.056           | 0.728            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:30             | 0.047           | 0.736            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:42             | 0.037           | 0.744            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 7:50             | 0.033           | 0.750            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 8:00             | 0.026           | 0.754            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 8:07             | 0.024           | 0.756            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 8:15             | 0.021           | 0.760            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 8:30             | 0.016           | 0.765            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 8:44             | 0.014           | 0.768            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | <u>1/8:59</u>    | 0.012           | 0.770            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 9:15             | 0.010           | 0.774            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 9:30             | 0.009           | 0.777            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 10:00            | 0.006           | 0.781            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 10:30            | 0.005           | 0.784            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 11:00            | 0.004           | 0.786            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 11:30            | 0.003           | 0.788            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 12:00            | 0.003           | 0.790            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 12:30            | 0.002           | 0.791            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 1:00             | 0.002           | 0.792            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 1:30             | 0.002           | 0.793            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 2:00             | 0.001           | 0.793            |
|                                                                                                                                                                                                             |                      |                    |                  |                      |                  | 2:30             | 0.000           | 0.793            |
| Notes: To convert runoff in in/hr to cfs, multiply by 92.7664.<br><u>1/</u> At this point float caught on sediment. The entries from 8:59 to the end of the runoff period are taken from a recession curve. |                      |                    |                  |                      |                  |                  |                 |                  |



| Stillwater, Oklahoma, Watershed W-3 (37.2) Area - 92.0 acres                                                                            |                      |                    |                  |                      |                  |                  |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of April 18, 1957                                                                                                                 |                      |                    |                  |                      |                  |                  |                 |                  |
| 3-20-57                                                                                                                                 | 0.61                 | 0                  | 4-18-57          | Raingage             | R-3              | 4-18-57          |                 |                  |
| 3-23                                                                                                                                    | 0.50                 | 0.050              | 12:20a           | 0                    | 0                | 1/1:12a          | 0.000           | 0.000            |
| 3-26                                                                                                                                    | 0.05                 | 0                  | 12:25            | 0.60                 | 0.05             | 1:14             | 0.001           | 0.000            |
| 3-30                                                                                                                                    | 0.45                 | 0                  | 12:30            | 0.84                 | 0.12             | 1:16             | 0.004           | 0.000            |
| 4-3                                                                                                                                     | 0.93                 | 0.223              | 12:35            | 0                    | 0.12             | 1:22             | 0.009           | 0.001            |
| 4-7                                                                                                                                     | 0.27                 | 0                  | 12:40            | 0                    | 0.12             | 1:32             | 0.006           | 0.002            |
| Watershed Conditions: All of<br>the area was in native grass<br>pasture in poor condition be-<br>cause of drought the previous<br>year. |                      |                    | 12:45            | 0.12                 | 0.13             | 1:53             | 0.003           | 0.003            |
|                                                                                                                                         |                      |                    | 12:50            | 0.24                 | 0.15             | 2:00             | 0.007           | 0.004            |
|                                                                                                                                         |                      |                    | 12:55            | 0.36                 | 0.18             | 2:44             | 0.006           | 0.009            |
|                                                                                                                                         |                      |                    | 1:00             | 1.20                 | 0.28             | 3:00             | 0.014           | 0.011            |
|                                                                                                                                         |                      |                    | 1:05             | 1.92                 | 0.44             | 3:09             | 0.024           | 0.014            |
|                                                                                                                                         |                      |                    | 1:10             | 0.84                 | 0.51             | 3:14             | 0.038           | 0.017            |
|                                                                                                                                         |                      |                    | 1:15             | 0.12                 | 0.52             | 3:18             | 0.061           | 0.020            |
|                                                                                                                                         |                      |                    | 1:20             | 0                    | 0.52             | 3:21             | 0.084           | 0.024            |
|                                                                                                                                         |                      |                    | 1:50             | 0                    | 0.53             | 3:24             | 0.120           | 0.029            |
|                                                                                                                                         |                      |                    | 1:55             | 0                    | 0.53             | 3:26             | 0.156           | 0.034            |
|                                                                                                                                         |                      |                    | 2:00             | 0.12                 | 0.54             | 3:30             | 0.271           | 0.048            |
|                                                                                                                                         |                      |                    | 2:10             | 0                    | 0.54             | 3:36             | 0.515           | 0.087            |
|                                                                                                                                         |                      |                    | 2:15             | 0.24                 | 0.56             | 3:44             | 0.886           | 0.180            |
|                                                                                                                                         |                      |                    | 2:20             | 0.24                 | 0.58             | 3:52             | 1.389           | 0.332            |
|                                                                                                                                         |                      |                    | 2:25             | 0.12                 | 0.59             | 3:57             | 2.201           | 0.482            |
|                                                                                                                                         |                      |                    | 2:30             | 0                    | 0.59             | 4:01             | 2.960           | 0.535            |
|                                                                                                                                         |                      |                    | 2:35             | 0.36                 | 0.62             | 4:04             | 3.830           | 0.704            |
|                                                                                                                                         |                      |                    | 2:40             | 0.12                 | 0.63             | 4:08             | 4.520           | 0.982            |
|                                                                                                                                         |                      |                    | 2:45             | 0.96                 | 0.71             | 4:11             | 4.320           | 1.204            |
|                                                                                                                                         |                      |                    | 2:50             | 0.48                 | 0.75             | 4:13             | 3.850           | 1.340            |
|                                                                                                                                         |                      |                    | 2:55             | 0.12                 | 0.76             | 4:17             | 2.830           | 1.563            |
|                                                                                                                                         |                      |                    | 3:00             | 0.36                 | 0.79             | 4:22             | 2.074           | 1.767            |
|                                                                                                                                         |                      |                    | 3:05             | 0.84                 | 0.86             | 4:30             | 1.260           | 1.990            |
|                                                                                                                                         |                      |                    | 3:10             | 1.32                 | 0.97             | 4:36             | 1.020           | 2.104            |
|                                                                                                                                         |                      |                    | 3:15             | 0.96                 | 1.05             | 4:40             | 0.870           | 2.167            |
|                                                                                                                                         |                      |                    | 3:20             | 1.08                 | 1.14             | 4:46             | 0.783           | 2.249            |
|                                                                                                                                         |                      |                    | 3:25             | 1.56                 | 1.27             | 4:51             | 0.819           | 2.316            |
|                                                                                                                                         |                      |                    | 3:30             | 1.56                 | 1.40             | 4:54             | 0.666           | 2.353            |
|                                                                                                                                         |                      |                    | 3:35             | 1.20                 | 1.50             | 4:58             | 0.468           | 2.391            |
|                                                                                                                                         |                      |                    | 3:40             | 1.92                 | 1.66             | 5:12             | 0.264           | 2.476            |
|                                                                                                                                         |                      |                    | 3:45             | 2.16                 | 1.84             | 5:34             | 0.142           | 2.551            |
|                                                                                                                                         |                      |                    | 3:50             | 2.76                 | 2.07             | 5:50             | 0.091           | 2.582            |
|                                                                                                                                         |                      |                    | 3:55             | 4.20                 | 2.42             | 6:16             | 0.057           | 2.614            |
|                                                                                                                                         |                      |                    | 4:00             | 5:40                 | 2.97             | 6:36             | 0.041           | 2.630            |
|                                                                                                                                         |                      |                    | 4:05             | 6.00                 | 3.47             | 7:00             | 0.028           | 2.644            |
|                                                                                                                                         |                      |                    | 4:10             | 2.52                 | 3.68             | 7:40             | 0.017           | 2.659            |
|                                                                                                                                         |                      |                    | 4:15             | 1.44                 | 3.80             | 8:48             | 0.009           | 2.674            |
|                                                                                                                                         |                      |                    | 4:20             | 0.48                 | 3.84             | 11:00            | 0.004           | 2.689            |
|                                                                                                                                         |                      |                    | 4:25             | 0.36                 | 3.87             | 11:15            | 0.004           | 2.690            |
|                                                                                                                                         |                      |                    | 4:30             | 0.24                 | 3.89             | 11:23            | 0.006           | 2.691            |
|                                                                                                                                         |                      |                    | 4:40             | 0.12                 | 3.91             | 4:00p            | 0.002           | 2.708            |

Notes: To convert runoff in in/hr to cfs, multiply by 92.7664.  
 1/Corrected for retention by pond until 3:57 when pond started to flow over spillway.

| Stillwater, Oklahoma, Watershed W-3 (37.2) Area - 92.0 acres                                                              |                      |                    |                  |                      |                  |                  |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                     |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 10, 1957                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |
| 5-11-57                                                                                                                   | 0.70                 | 0                  | 6-10-57          | Raingage             | R-3              | 6-10-57          |                 |                  |
| 5-13                                                                                                                      | 0.48                 | 0.150              | 12:58a           | 0                    | 0                | 1:05a            | 0.001           | 0                |
| 5-16                                                                                                                      | 2.85                 | 2.092              | 1:03             | 0.48                 | 0.04             | 1:14             | 0.007           | 0.001            |
| 5-17                                                                                                                      | 0.33                 | 0.148              | 1:08             | 0.72                 | 0.10             | 1:17             | 0.014           | 0.001            |
| 5-20                                                                                                                      | 1.28                 | 0.825              | 1:13             | 1.56                 | 0.23             | 1:19             | 0.022           | 0.002            |
| 5-22                                                                                                                      | 0.68                 | 0.413              | 1:18             | 2.64                 | 0.45             | 1:21             | 0.039           | 0.003            |
| 5-24                                                                                                                      | 0.98                 | 0.590              | 1:23             | 2.28                 | 0.64             | 1:22             | 0.049           | 0.004            |
| 5-30                                                                                                                      | 0.89                 | 0.084              | 1:28             | 1.80                 | 0.79             | 1:23             | 0.062           | 0.004            |
| 5-31                                                                                                                      | 0.37                 | 0                  | 1:33             | 1.44                 | 0.91             | 1:24             | 0.077           | 0.006            |
| 6-1                                                                                                                       | 0.05                 | 0.035              | 1:38             | 1.44                 | 1.03             | 1:25             | 0.091           | 0.007            |
| 6-2                                                                                                                       | 0.73                 | 0.549              | 1:43             | 0.72                 | 1.09             | 1:27             | 0.126           | 0.011            |
| 6-3                                                                                                                       | 0.20                 | 0                  | 1:48             | 0.36                 | 1.12             | 1:29             | 0.158           | 0.015            |
| 6-4                                                                                                                       | 0.16                 | 0.149              | 1:53             | 0.60                 | 1.17             | 1:32             | 0.258           | 0.026            |
| 6-9                                                                                                                       | 0.57                 | 0.166              | 1:58             | 0.24                 | 1.19             | 1:35             | 0.403           | 0.042            |
| Watershed Conditions: All of the area was in native grass pasture in poor condition because of drought the previous year. |                      |                    | 2:03             | 0.12                 | 1.20             | 1:42             | 0.621           | 0.102            |
|                                                                                                                           |                      |                    | 2:08             | 0.12                 | 1.21             | 1:50             | 0.827           | 0.199            |
|                                                                                                                           |                      |                    | 2:13             | 0                    | 1.21             | 1:58             | 0.859           | 0.311            |
|                                                                                                                           |                      |                    | 2:18             | 0.12                 | 1.22             | 2:08             | 0.718           | 0.442            |
|                                                                                                                           |                      |                    | 2:23             | 0.12                 | 1.23             | 2:18             | 0.500           | 0.544            |
|                                                                                                                           |                      |                    | 2:28             | 0.12                 | 1.24             | 2:36             | 0.288           | 0.662            |
|                                                                                                                           |                      |                    | 2:48             | 0.18                 | 1.27             | 3:00             | 0.144           | 0.748            |
|                                                                                                                           |                      |                    | 3:03             | 0.12                 | 1.30             | 3:22             | 0.083           | 0.790            |
|                                                                                                                           |                      |                    |                  |                      |                  | 3:42             | 0.056           | 0.813            |
|                                                                                                                           |                      |                    |                  |                      |                  | 4:02             | 0.039           | 0.829            |
|                                                                                                                           |                      |                    |                  |                      |                  | 4:22             | 0.027           | 0.840            |
|                                                                                                                           |                      |                    |                  |                      |                  | 4:48             | 0.018           | 0.850            |
|                                                                                                                           |                      |                    |                  |                      |                  | 5:20             | 0.011           | 0.857            |
|                                                                                                                           |                      |                    |                  |                      |                  | 6:00             | 0.007           | 0.863            |
|                                                                                                                           |                      |                    |                  |                      |                  | 7:26             | 0.004           | 0.871            |
|                                                                                                                           |                      |                    |                  |                      |                  | 12:00            | 0.001           | 0.881            |
|                                                                                                                           |                      |                    |                  |                      |                  | 5:15             | 0.001           | 0.886            |
| Notes: To convert runoff in in/hr to cfs, multiply by 92.7664.                                                            |                      |                    |                  |                      |                  |                  |                 |                  |

Stillwater, Oklahoma, Watershed W-3 (37.2) Area - 92.0 acres

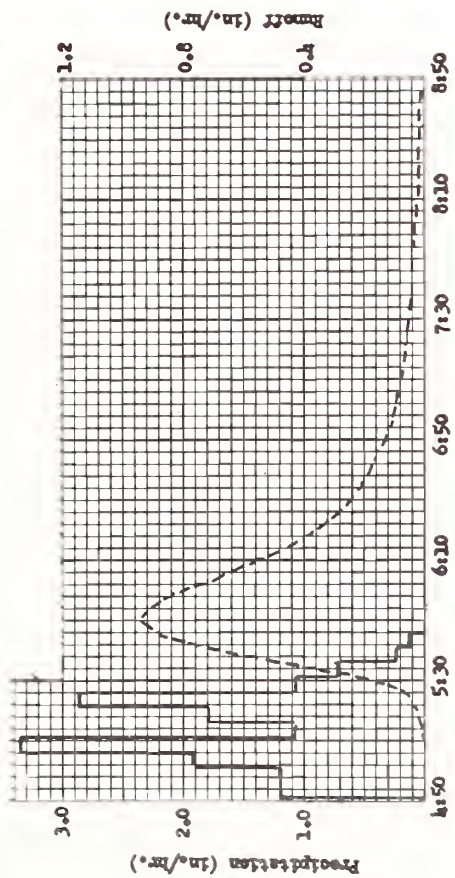
| Antecedent conditions  |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                   | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 27, 1957 |                      |                    |                  |                      |                  |                  |                 |                  |
| 5-30-57                | 0.89                 | 0.084              | 6-27-57          | Raingage             | R-3              | 6-27-57          |                 |                  |
| 5-31                   | 0.37                 | 0                  | 10:32p           | 0                    | 0                | 10:38p           | 0.001           | 0                |
| 6-1                    | 0.05                 | 0.035              | 10:37            | 1.68                 | 0.14             | 10:43            | 0.020           | 0.001            |
| 6-2                    | 0.73                 | 0.549              | 10:42            | 6.12                 | 0.65             | 10:44            | 0.032           | 0.001            |
| 6-3                    | 0.20                 | 0                  | 10:47            | 3.36                 | 0.93             | 10:45            | 0.048           | 0.002            |
| 6-4                    | 0.16                 | 0.149              | 10:52            | 0.84                 | 1.00             | 10:46            | 0.076           | 0.003            |
| 6-9                    | 0.57                 | 0.166              | 10:57            | 0.12                 | 1.01             | 10:47            | 0.111           | 0.004            |
| 6-10                   | 1.38                 | 0.886              |                  |                      |                  | 10:48            | 0.146           | 0.007            |
| 6-12                   | 0.58                 | 0.220              |                  |                      |                  | 10:49            | 0.179           | 0.009            |
| 6-17                   | 0.86                 | 0.018              |                  |                      |                  | 10:51            | 0.232           | 0.016            |
| 6-18                   | 2.32                 | 1.765              |                  |                      |                  | 10:54            | 0.373           | 0.031            |
| 6-22                   | 0.50                 | 0.008              |                  |                      |                  | 10:58            | 0.662           | 0.066            |
| 6-23                   | 2.42                 | 1.748              |                  |                      |                  | 11:00            | 0.766           | 0.090            |
| 6-26                   | 0.52                 | 0.018              |                  |                      |                  | 11:06            | 0.908           | 0.173            |
|                        |                      |                    |                  |                      |                  | 11:13            | 0.934           | 0.281            |
|                        |                      |                    |                  |                      |                  | 11:22            | 0.738           | 0.406            |
|                        |                      |                    |                  |                      |                  | 11:30            | 0.547           | 0.492            |
|                        |                      |                    |                  |                      |                  | 11:36            | 0.430           | 0.541            |
|                        |                      |                    |                  |                      |                  | 11:52            | 0.204           | 0.625            |
|                        |                      |                    |                  |                      |                  | 12:10            | 0.094           | 0.670            |
|                        |                      |                    |                  |                      |                  | 12:26            | 0.057           | 0.690            |
|                        |                      |                    |                  |                      |                  | 12:40            | 0.040           | 0.701            |
|                        |                      |                    |                  |                      |                  | 12:56            | 0.030           | 0.711            |
|                        |                      |                    |                  |                      |                  | 1:18             | 0.018           | 0.720            |
|                        |                      |                    |                  |                      |                  | 1:48             | 0.011           | 0.727            |
|                        |                      |                    |                  |                      |                  | 2:30             | 0.007           | 0.733            |
|                        |                      |                    |                  |                      |                  | 3:56             | 0.003           | 0.740            |
|                        |                      |                    |                  |                      |                  | 9:50             | 0.001           | 0.753            |
|                        |                      |                    |                  |                      |                  | 4:18             | 0               | 0.757            |

Watershed Conditions: All of the area was in native grass pasture in poor condition because of drought the previous year.

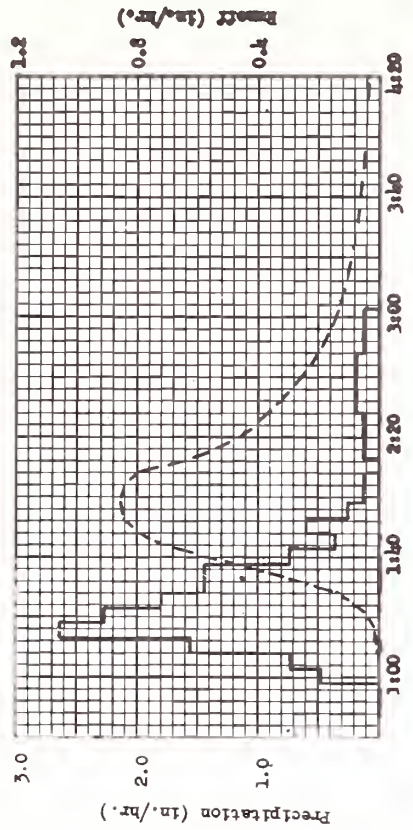
Notes:

To convert runoff in in/hr to cfs, multiply by 92.7664.

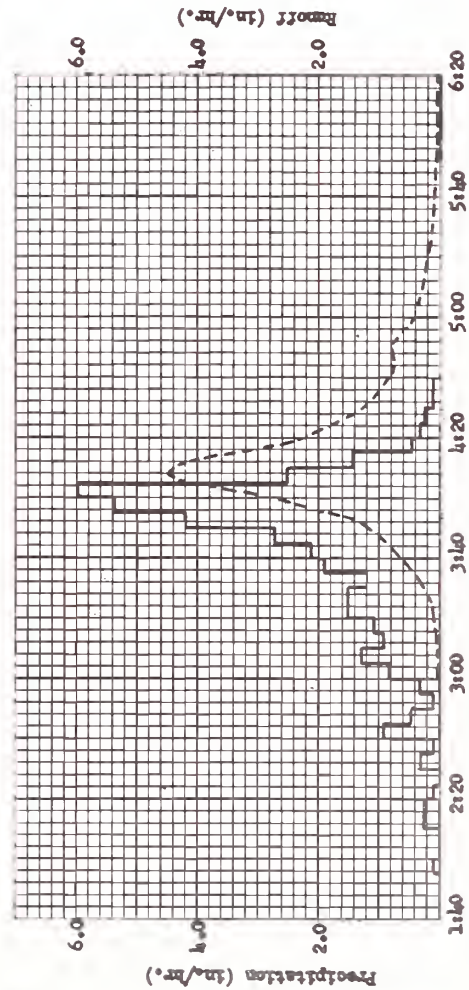




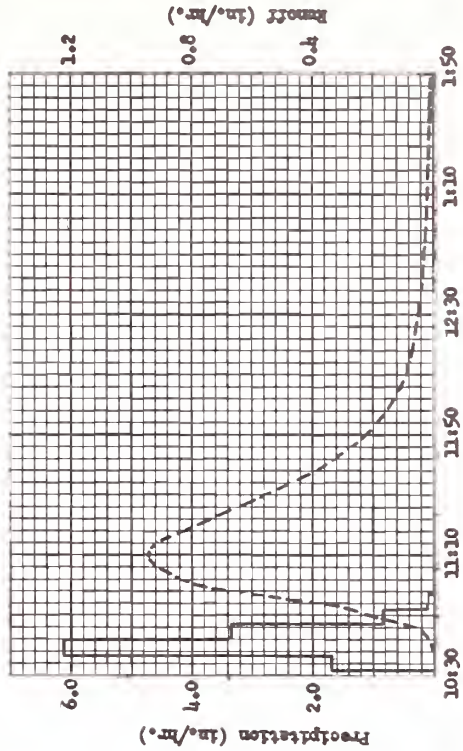
May 23, 1955 pm



June 10, 1957 am



April 18, 1957 am



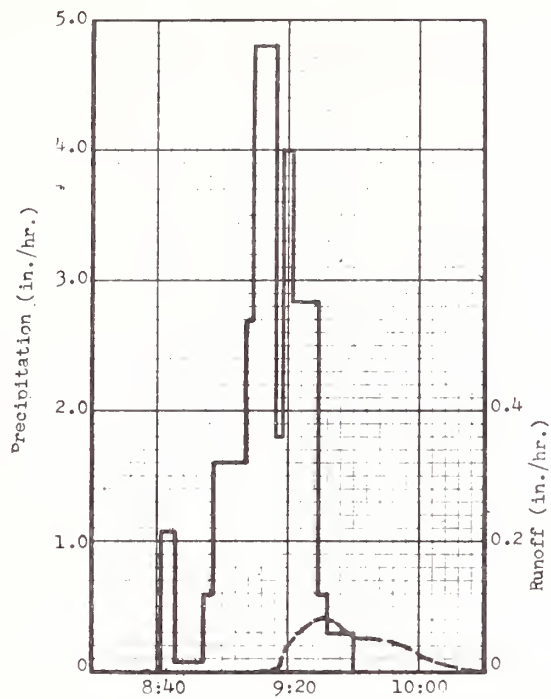
June 27, 1957 pm



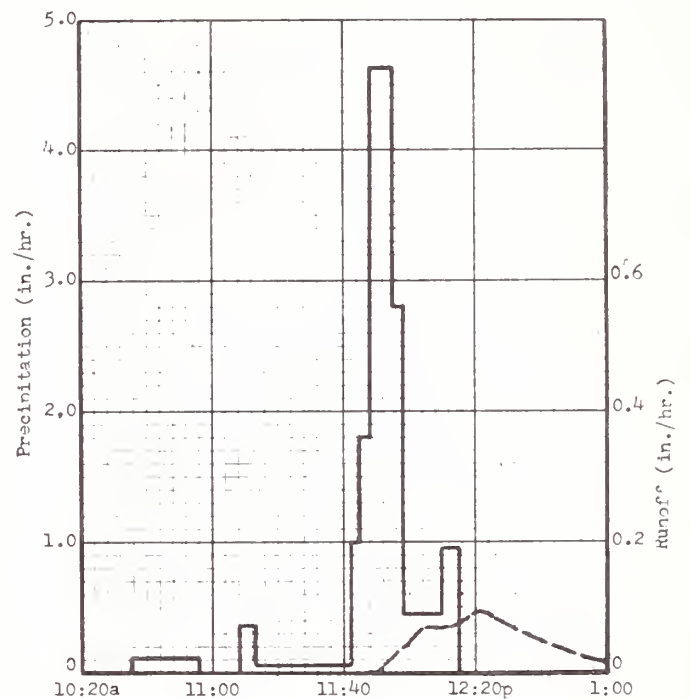


| Tyler, Texas                                                                                                                                                                                                                       |                      |                    | Watershed # 2    |                      |                  | (40.1)           |                 |                  | Area - 9.15 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                              |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| <u>Event of May 17, 1942</u>                                                                                                                                                                                                       |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 4-19-42                                                                                                                                                                                                                            | .10                  | 0                  | 5-17-42          | Raingage             | P-1              | 5-17-42          |                 |                  |                   |  |  |
| 4-20                                                                                                                                                                                                                               | 1.10                 | .01                | 8:41p            | 0                    | 0                | 9:10p            | 0               | 0                |                   |  |  |
| 4-23                                                                                                                                                                                                                               | .86                  | T                  | :46              | 1.08                 | .09              | :11              | .0016           | 0                |                   |  |  |
| 4-24                                                                                                                                                                                                                               | .20                  | 0                  | :54              | .08                  | .10              | :14              | .0066           | T                |                   |  |  |
| 4-25                                                                                                                                                                                                                               | .40                  | .01                | :57              | .60                  | .13              | :18              | .0102           | T                |                   |  |  |
| 4-28                                                                                                                                                                                                                               | .03                  | 0                  | 9:07             | 1.62                 | .40              | :22              | .0571           | T                |                   |  |  |
| 5-3                                                                                                                                                                                                                                | .01                  | 0                  | :09              | 2.70                 | .49              | :30              | .0873           | .01              |                   |  |  |
| 5-6                                                                                                                                                                                                                                | .61                  | 0                  | :16              | 4.80                 | 1.05             | :41              | .0525           | .03              |                   |  |  |
| 5-14                                                                                                                                                                                                                               | .02                  | 0                  | :18              | 1.80                 | 1.11             | :46              | .0525           | .03              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :21              | 4.00                 | 1.31             | 10:00            | .0255           | .04              |                   |  |  |
| <u>Watershed Conditions: 100%</u><br>improved pasture consisting of<br>burr clover, black medic clover<br>and bermuda grass. Controlled<br>grazing with mules and cattle<br>was practiced and mowed in<br>Summer for weed control. |                      |                    | :29              | 2.85                 | 1.69             | :10              | .0102           | .04              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :32              | .60                  | 1.72             | :21              | .0038           | .04              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :40e             | .30                  | 1.76             | :30              | .0016           | .04              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  | :46              | .0002           | .04              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 12:00e           | 0               | .04              |                   |  |  |
| <u>Event of May 10, 1943</u>                                                                                                                                                                                                       |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 4-11-43                                                                                                                                                                                                                            | .24                  | 0                  | 5-10-43          | Raingage             | P-1              | 5-10-43          |                 |                  |                   |  |  |
| 4-17                                                                                                                                                                                                                               | 2.60                 | .21                | 10:35a           | 0                    | 0                | 11:46a           | 0               | 0                |                   |  |  |
| 4-18                                                                                                                                                                                                                               | 0                    | T                  | :55              | .12                  | .04              | :50              | .0002           | 0                |                   |  |  |
| 4-20                                                                                                                                                                                                                               | .01                  | 0                  | 11:08            | 0                    | .04              | :52              | .0122           | T                |                   |  |  |
| 5-6                                                                                                                                                                                                                                | 2.39                 | .01                | :13              | .36                  | .07              | :58              | .0396           | T                |                   |  |  |
| 5-7                                                                                                                                                                                                                                | .65                  | .03                | :42              | .06                  | .10              | 12:04p           | .0700           | .01              |                   |  |  |
| 5-8                                                                                                                                                                                                                                | .36                  | 0                  | :45              | 1.00                 | .15              | :10              | .0673           | .02              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :48              | 1.80                 | .24              | :20              | .0934           | .03              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :55              | 4.63                 | .78              | :32              | .0673           | .04              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :58              | 2.80                 | .92              | :42              | .0437           | .05              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | 12:10p           | .45                  | 1.01             | 1:00             | .0157           | .06              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :15e             | .96                  | 1.09             | :28              | .0038           | .07              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 2:00             | .0008           | .07              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  | 3:00e            | 0               | .07              |                   |  |  |
| <u>Event of October 8, 1945</u>                                                                                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 9-12-45                                                                                                                                                                                                                            | .10                  | 0                  | 10-8-45          | Raingage             | P-1              | 10-8-45          |                 |                  |                   |  |  |
| 9-22                                                                                                                                                                                                                               | .02                  | 0                  | 5:57a            | 0                    | 0                | 7:10a            | 0               | 0                |                   |  |  |
| 9-27                                                                                                                                                                                                                               | .40                  | 0                  | 6:00             | 1.20                 | .06              | :20              | .0321           | T                |                   |  |  |
| 9-28                                                                                                                                                                                                                               | 1.70                 | 0                  | :10              | .06                  | .07              | :30              | .278            | .02              |                   |  |  |
| 9-29                                                                                                                                                                                                                               | 1.63                 | .03                | :32              | .38                  | .21              | :40              | .452            | .07              |                   |  |  |
| 9-30                                                                                                                                                                                                                               | .05                  | 0                  | :50              | 1.00                 | .51              | :52              | .598            | .18              |                   |  |  |
| 10-4                                                                                                                                                                                                                               | .21                  | 0                  | 7:00             | 1.68                 | .79              | 8:30             | .317            | .46              |                   |  |  |
| 10-5                                                                                                                                                                                                                               | 1.29                 | 0                  | :05              | 2.38                 | 1.03             | :44              | .278            | .52              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :10              | 2.40                 | 1.23             | 9:00             | .0699           | .55              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :13              | 2.20                 | 1.34             | :24              | .0169           | .57              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :19              | 1.00                 | 1.44             | 10:30            | .0016           | .58              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :25              | 2.40                 | 1.68             | 11:30e           | 0               | .58              |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :29              | 3.30                 | 1.90             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :45              | .56                  | 2.05             |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    | :56              | 1.15                 | 2.26             |                  |                 |                  |                   |  |  |
| <u>Watershed Conditions: 100%</u><br>improved pasture consisting of<br>burr clover, black medic clover<br>and bermuda grass. Controlled<br>grazing with mules and cattle<br>was practiced and mowed in<br>Summer for weed control. |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 9.23                                                                                                                                                                          |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

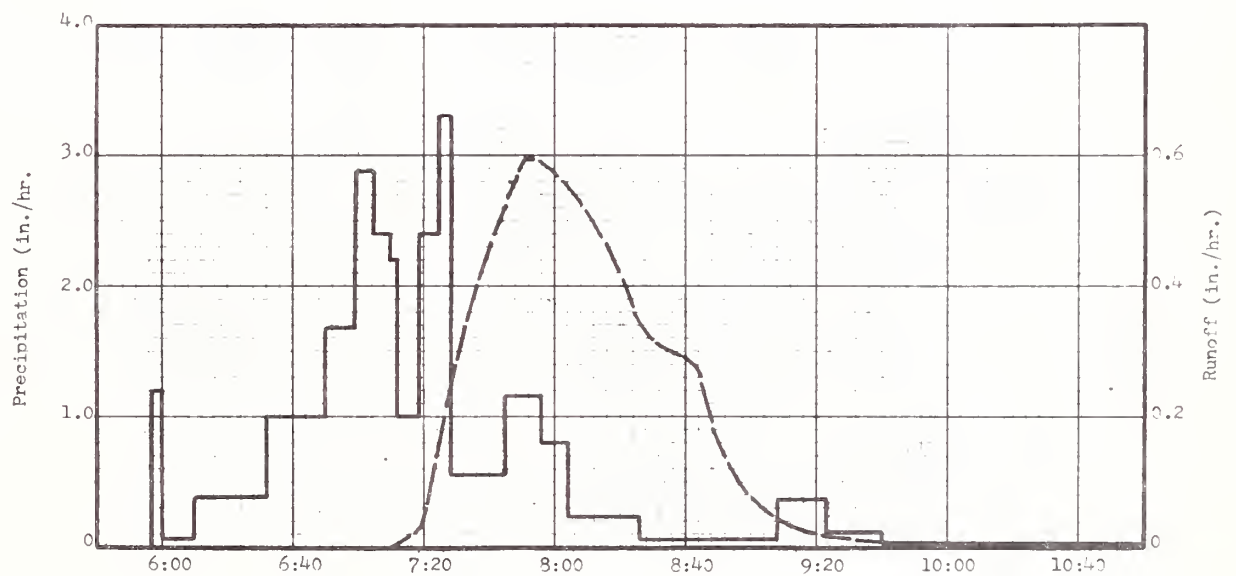
| Antecedent conditions                                     |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-----------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of October 8, 1945 Cont'd</u>                    |                      |                    |                  |                      |                  |                  |                 |                  |
|                                                           |                      |                    | 8:05             | .80                  | 2.38             |                  |                 |                  |
|                                                           |                      |                    | :26              | .23                  | 2.46             |                  |                 |                  |
|                                                           |                      |                    | 9:08             | .06                  | 2.50             |                  |                 |                  |
|                                                           |                      |                    | :23              | .36                  | 2.59             |                  |                 |                  |
|                                                           |                      |                    | :40              | .11                  | 2.62             |                  |                 |                  |
|                                                           |                      |                    | 11:00e           | .03                  | 2.63             |                  |                 |                  |
| Notes: To convert runoff in in/hr to cfs multiply by 9.23 |                      |                    |                  |                      |                  |                  |                 |                  |



May 17, 1942 pm



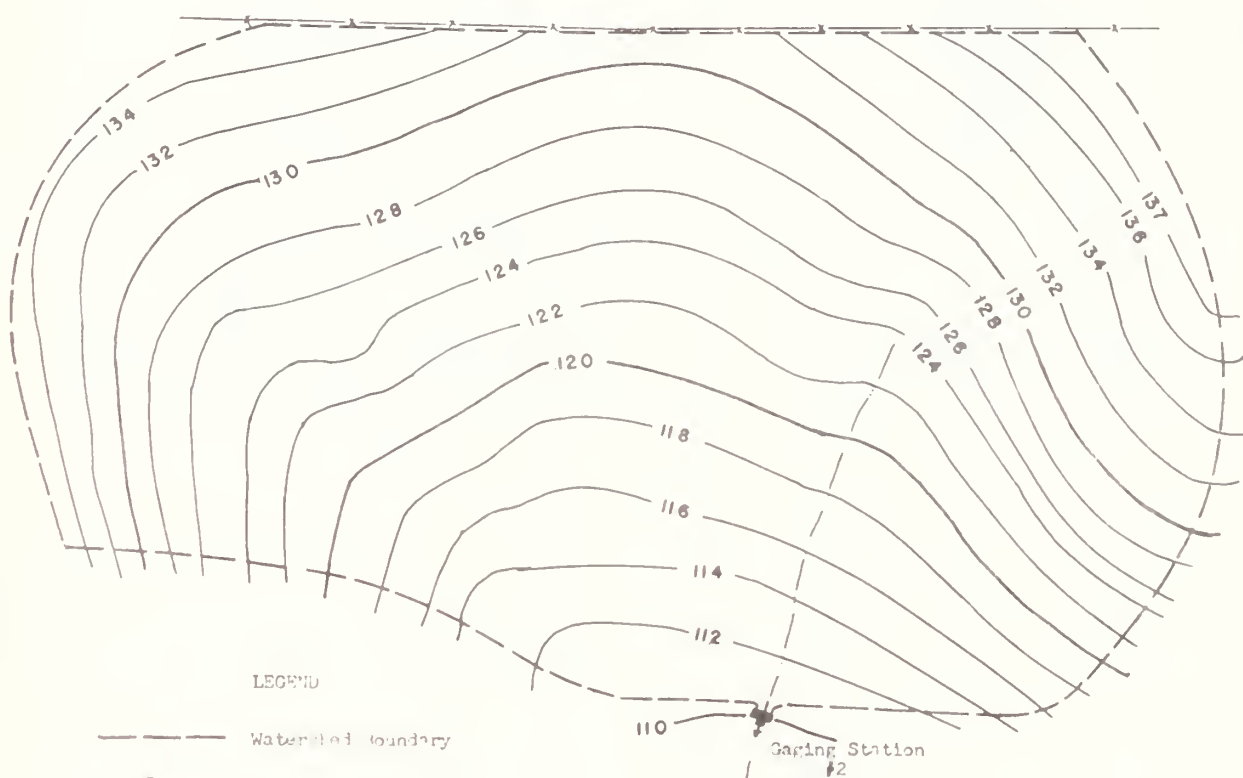
May 10, 1943









October 8, 1945 am

TYLER, TEXAS WATERSHED # 2





LEGEND

-  Watershed boundary
-  Recording rain gage
-  Gaging Station
-  130 Contours
-  Natural Waterway
-  Fence

Scale

0 100 200 300 feet

Rain gage  
P-1

TYLER, TEXAS  
WATERSHED #2

| Vega, Texas                                                                                                                                                                                  |                      |                    | Watershed W-II        |                      |                  | (41.2)           |                 |                  | Area - 95.9 |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-----------------------|----------------------|------------------|------------------|-----------------|------------------|-------------|--|--|
| Antecedent conditions                                                                                                                                                                        |                      |                    | Rainfall              |                      |                  | Runoff           |                 |                  |             |  |  |
| Date                                                                                                                                                                                         | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time      | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |             |  |  |
|                                                                                                                                                                                              |                      |                    | Event of May 30, 1938 |                      |                  |                  |                 |                  |             |  |  |
| 4-30-38                                                                                                                                                                                      | 0.31                 | 0.                 | 5-30-38               | Raingage R-3         |                  | 5-30-38          |                 |                  |             |  |  |
| 5-4                                                                                                                                                                                          | .07                  | 0.                 | 1:27p                 | 0.                   | 0.               | 1:30p            | 0.              | 0.               |             |  |  |
| 5-12                                                                                                                                                                                         | .12                  | 0.                 | 1:30                  | 7.20                 | .24              | 1:36             | .221            | .005             |             |  |  |
| 5-16                                                                                                                                                                                         | .06                  | 0.                 | 1:40                  | 3.60                 | .84              | 1:42             | .338            | .028             |             |  |  |
| 5-21                                                                                                                                                                                         | .12                  | 0.                 | 1:43                  | 2.00                 | .94              | 1:45             | .584            | .050             |             |  |  |
| <u>WATERSHED CONDITIONS:</u> Rangeland<br>subject to moderate grazing.<br>Vegetation consists of buffalo<br>grass, blue and sidecats grama,<br>and sand dropseed, with some<br>annual weeds. |                      |                    | 1:47                  | 1.50                 | 1.04             | 1:47             | 1.18            | .078             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:52                  | .72                  | 1.10             | 1:48             | 1.46            | .100             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:56                  | .30                  | 1.12             | 1:49             | 1.45            | .124             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 2:14                  | .07                  | 1.14             | 1:54             | 1.38            | .234             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:42                  | .11                  | 1.19             | 2:00             | 1.06            | .351             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:50                  | .22                  | 1.22             | 1:06             | .769            | .442             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:52                  | 1.20                 | 1.26             | 1:12             | .573            | .509             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:59                  | .08                  | 1.27             | 1:18             | .420            | .558             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 3:02                  | .60                  | 1.30             | 1:25             | .285            | .600             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:10                  | .30                  | 1.34             | 1:30             | .234            | .621             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:19                  | 3.34                 | 1.84             | 1:35             | .196            | .639             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:23                  | 2.70                 | 2.02             | 1:40             | .161            | .654             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:28                  | .48                  | 2.06             | 1:45             | .124            | .666             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 4:24                  | 0.                   | 2.06             | 1:50             | .099            | .675             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:44                  | .06                  | 2.08             | 1:55             | .084            | .683             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:58                  | .04                  | 2.09             | 3:00             | .074            | .689             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 5:06                  | .08                  | 2.10             | 1:05             | .071            | .695             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 1:48                  | .01                  | 2.11             | 1:09             | .070            | .700             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 7:00                  | .01                  | 2.12             | 1:13             | .092            | .702             |             |  |  |
|                                                                                                                                                                                              |                      |                    | 7:30                  | 0.                   | 2.12             | 1:19             | .206            | .718             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:24             | .562            | .784             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:29             | .935            | .812             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:31             | 1.01            | .845             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:32             | .980            | .861             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:36             | .923            | .926             |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:50             | .587            | 1.103            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:55             | .583            | 1.151            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 4:00             | .499            | 1.196            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:05             | .406            | 1.234            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:10             | .312            | 1.266            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:20             | .197            | 1.308            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:25             | .159            | 1.323            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:35             | .099            | 1.344            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:50             | .052            | 1.362            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 5:00             | .034            | 1.370            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 1:20             | .018            | 1.378            |             |  |  |
|                                                                                                                                                                                              |                      |                    |                       |                      |                  | 9:00             | 0.              | 1.388            |             |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 96.667

| Vega, Texas                                                                                                                                                                           |                      |                    | Watershed W-II   |                      |                  | (41.2)           |                 |                  | Area = 95.9 |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------|--|--|
| Antecedent conditions                                                                                                                                                                 |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |             |  |  |
| Date                                                                                                                                                                                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |             |  |  |
| Event of October 9, 1938                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                 |                  |             |  |  |
| 9-28-38                                                                                                                                                                               | 0.11                 | 0.                 | 10-9-38          | Raingage R-4 *       |                  | 10-9-38          |                 |                  |             |  |  |
| 10-8                                                                                                                                                                                  | .84                  | 0.                 | 1:00p            | 0.                   | 0.               | 1:02p            | 0.              | 0.               |             |  |  |
| 10-9                                                                                                                                                                                  | .57                  | 0.                 | 1:04             | 2.25                 | .15              | 1:06             | .019            | .001             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:08             | 1.05                 | .22              | 1:12             | .035            | .004             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:10             | 1.50                 | .27              | 1:17             | .066            | .007             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:16             | .70                  | .34              | 1:22             | .098            | .014             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:22             | .30                  | .37              | 1:26             | .182            | .023             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:28             | .40                  | .41              | 1:29             | .260            | .030             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:38             | .30                  | .46              | 1:31             | .328            | .051             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:41             | .80                  | .50              | 1:36             | .342            | .073             |             |  |  |
| WATERSHED CONDITIONS: Rangeland<br>subject to moderate grazing.<br>Vegetation consists of buffalo<br>grass, blue and sideoats grama,<br>and sand dropseed, with some<br>annual weeds. |                      |                    | 1:46             | 1.32                 | .61              | 1:42             | .402            | .110             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:49             | 1.80                 | .70              | 1:46             | .485            | .139             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:53             | 2.40                 | .86              | 1:49             | .642            | .177             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:58             | 1.44                 | .98              | 1:52             | .759            | .199             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 2:08             | .42                  | 1.05             | 1:54             | .940            | .228             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:20             | .15                  | 1.08             | 1:57             | 1.04            | .277             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:46             | .05                  | 1.10             | 1:58             | 1.10            | .295             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 3:10             | 0.                   | 1.10             | 1:59             | 1.15            | .313             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 2:00             | 1.17            | .333             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:01             | 1.16            | .352             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 1:02             | 1.15                 | .371             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:06             | 1.04            | .444             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:12             | .871            | .539             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:18             | .701            | .615             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:24             | .540            | .686             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:30             | .436            | .727             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:36             | .360            | .760             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:42             | .293            | .787             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:48             | .195            | .827             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:54             | .147            | .841             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 3:00             | .127            | .853             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:06             | .108            | .863             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:12             | .076            | .878             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 1:30             | .046            | .893             |             |  |  |
|                                                                                                                                                                                       |                      |                    |                  |                      |                  | 4:00             | 0.              | .908             |             |  |  |

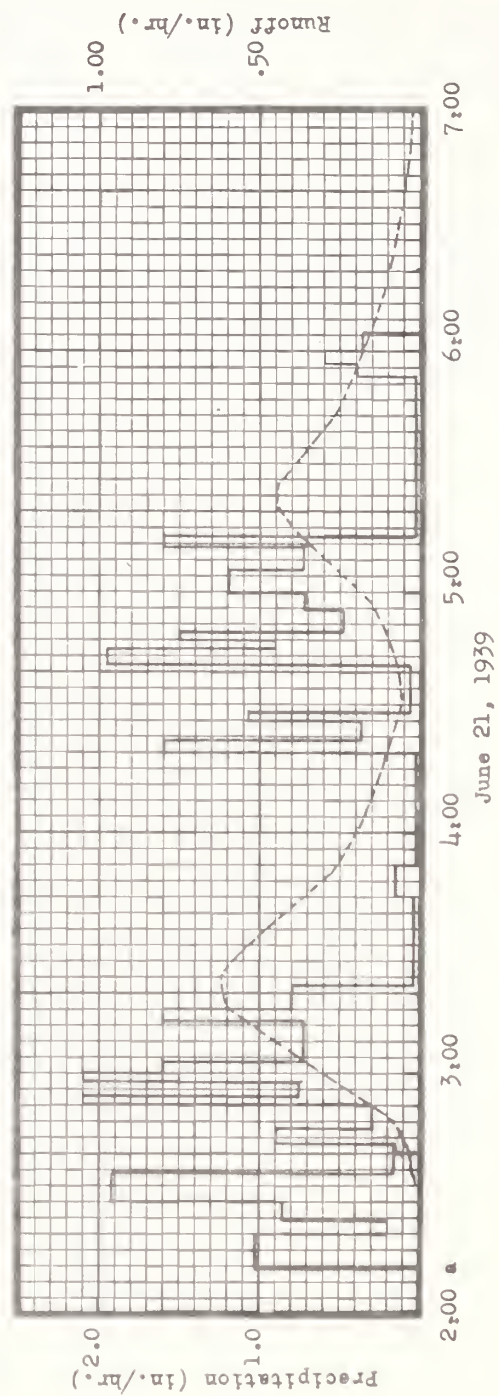
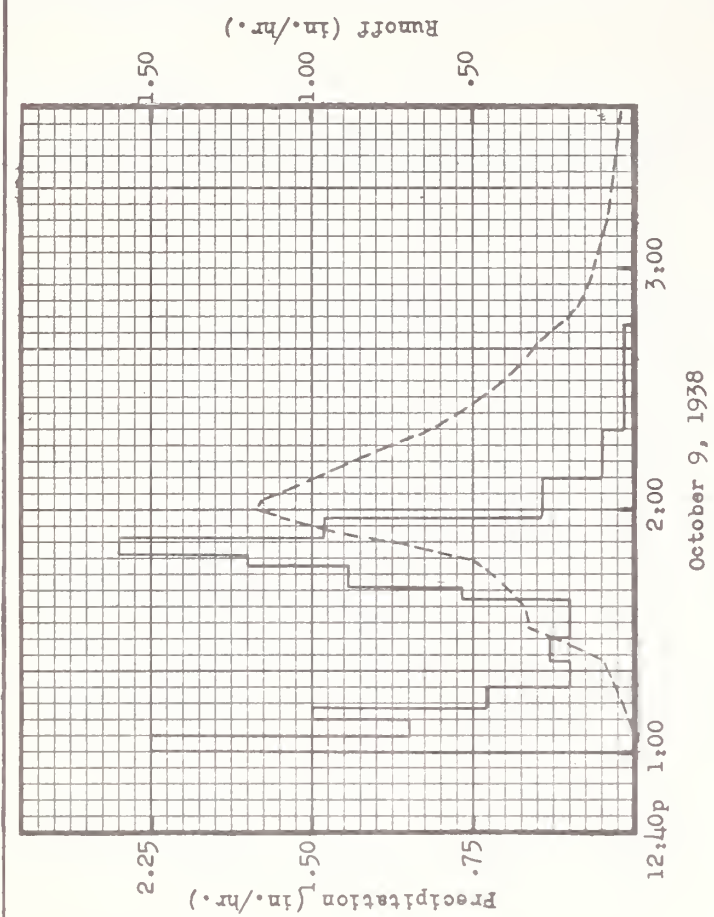
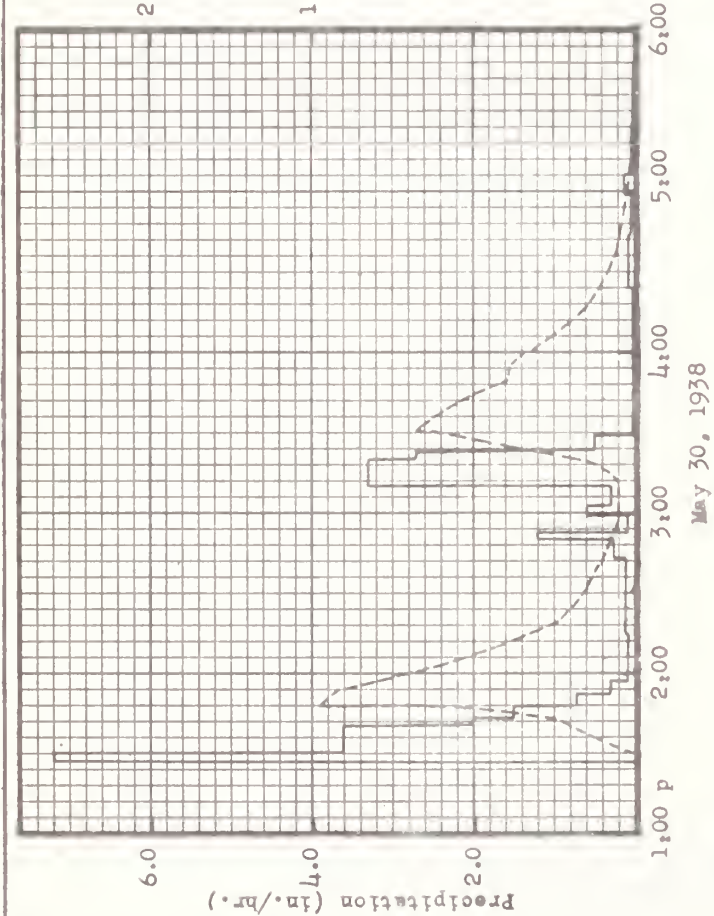
Notes: To convert runoff in in/hr to cfs, multiply by 96.667. \*No intensity record on Raingage R-3 due to clock stoppage. Total amount of rain at R-3 approximately 1.4 inches.

| Vega, Texas                                                                                                                                                                           |                      |                    | Watershed W-II         |                      |                  | (41.2)           |                 |                  | Area - 95.9 |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------|----------------------|------------------|------------------|-----------------|------------------|-------------|--|--|
| Antecedent conditions                                                                                                                                                                 |                      |                    | Rainfall               |                      |                  | Runoff           |                 |                  |             |  |  |
| Date                                                                                                                                                                                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time       | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |             |  |  |
|                                                                                                                                                                                       |                      |                    | Event of June 21, 1939 |                      |                  |                  |                 |                  |             |  |  |
| 5-31-39                                                                                                                                                                               | 0.06                 | 0.                 | 6-21-39                | Raingage R-3         |                  | 6-21-39          |                 |                  |             |  |  |
| 6-20                                                                                                                                                                                  | .10                  | 0.                 | 2:11A                  | 0.                   | 0.               | 2:15A            | 0.              | 0.               |             |  |  |
| 6-21                                                                                                                                                                                  | .56                  | 0.                 | :20                    | 1.13                 | .17              | :30              | .013            | .001             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :23                    | .20                  | .18              | :35              | .025            | .003             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :28                    | .85                  | .27              | :41              | .039            | .007             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :35                    | 1.92                 | .44              | :47              | .083            | .013             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :42                    | .17                  | .46              | :50              | .103            | .017             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :46                    | .90                  | .52              | 3:17             | .601            | .176             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :52                    | .30                  | .55              | :25              | .611            | .259             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :54                    | 2.10                 | .62              | :30              | .568            | .308             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :58                    | .75                  | .67              | :40              | .421            | .391             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 3:00                   | 2.10                 | .74              | :50              | .288            | .450             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :03                    | 1.60                 | .82              | 4:00             | .200            | .491             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :13                    | .72                  | .94              | :15              | .116            | .530             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :16                    | 1.60                 | 1.02             | 4:30             | .077            | .553             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :22                    | .80                  | 1.10             | :42              | .069            | .568             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :44                    | .03                  | 1.11             | :54              | .138            | .587             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :52                    | .15                  | 1.13             | 5:00             | .194            | .603             |             |  |  |
|                                                                                                                                                                                       |                      |                    | 4:20                   | .02                  | 1.14             | :12              | .352            | .657             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :23                    | 1.60                 | 1.22             | :21              | .442            | .717             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :28                    | .36                  | 1.25             | :24              | .446            | .740             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :33                    | 1.08                 | 1.34             | :27              | .446            | .762             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :42                    | .07                  | 1.35             | :45              | .256            | .870             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :46                    | 1.95                 | 1.48             | 6:15             | .108            | .954             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :48                    | .90                  | 1.51             | :45              | .048            | .993             |             |  |  |
|                                                                                                                                                                                       |                      |                    | :50                    | 1.50                 | 1.56             | 7:00             | .029            | 1.002            |             |  |  |
|                                                                                                                                                                                       |                      |                    | :55                    | .48                  | 1.60             | :30              | .012            | 1.012            |             |  |  |
|                                                                                                                                                                                       |                      |                    | 5:00                   | .72                  | 1.66             | 9:00             | .001            | 1.020            |             |  |  |
|                                                                                                                                                                                       |                      |                    | :06                    | 1.20                 | 1.78             | 11:00a           | 0.              | 1.021            |             |  |  |
|                                                                                                                                                                                       |                      |                    | :11                    | .72                  | 1.84             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | :14                    | 1.60                 | 1.92             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | :54                    | .03                  | 1.94             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | :57                    | .40                  | 1.96             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | 6:00                   | .60                  | 1.99             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | :05                    | .36                  | 2.02             |                  |                 |                  |             |  |  |
|                                                                                                                                                                                       |                      |                    | 7:00a                  | 0.                   | 2.06             |                  |                 |                  |             |  |  |
| WATERSHED CONDITIONS: Rangeland<br>subject to moderate grazing.<br>Vegetation consists of buffalo<br>grass, blue and sidecats grama,<br>and sand dropseed, with some<br>annual weeds. |                      |                    |                        |                      |                  |                  |                 |                  |             |  |  |

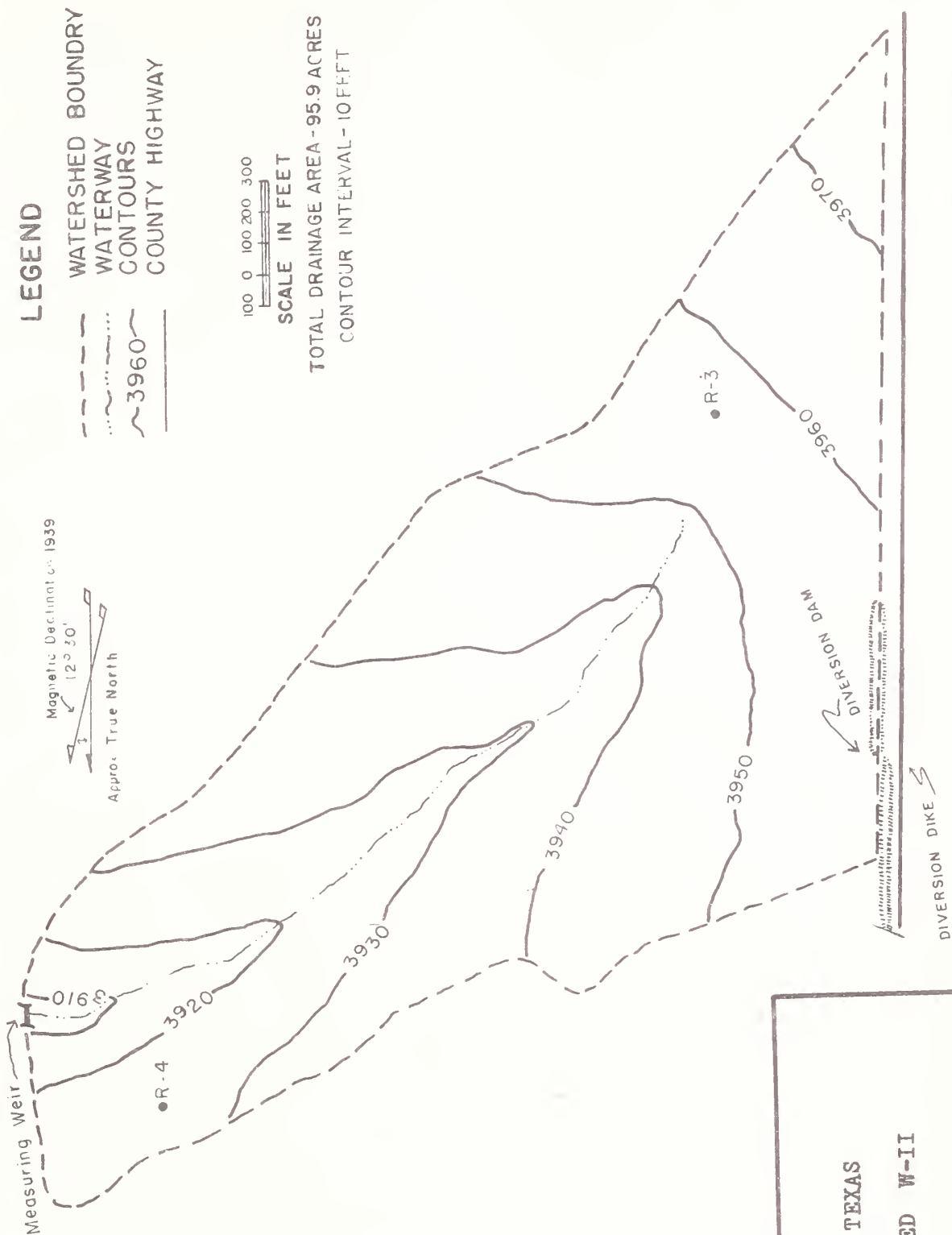
Notes: To convert runoff in in/hr to cfs, multiply by 96.667.

Notes: To convert runoff in in/hr to cfs, multiply by 96.667.





VEGA, TEXAS WATERSHED W-II





| Riesel (Waco), Texas                                                                                                                                                            |                   |                 | Watershed D <u>1/</u> (42.3) |                   |               | Area - 1110 acres |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|------------------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                           |                   |                 | Rainfall                     |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                            | Rainfall (inches) | Runoff (inches) | Date and time                | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| <u>Event of June 10, 1941</u>                                                                                                                                                   |                   |                 |                              |                   |               |                   |              |               |
| 5-11-41                                                                                                                                                                         | .09               | 0               | 6-10-41                      | Raingage          | 14            | 6-10-41           |              |               |
| 5-19                                                                                                                                                                            | 2.02              | .4955           | 11:19a                       | 0                 | 0             | 11:20a            | .0004        | 0             |
| 5-20                                                                                                                                                                            | .69               | .4267           | :23                          | 1.20              | .08           | :55               | .0112        | .0009         |
| 5-21                                                                                                                                                                            | .03               | .0241           | :25                          | .60               | .10           | :58               | .0254        | .0018         |
| 5-22                                                                                                                                                                            | .28               | .0925           | :28                          | 1.40              | .17           | 12:15p            | .129         | .0227         |
| 5-23,24                                                                                                                                                                         | 0                 | .0151           | :34                          | .96               | .24           | :20               | .168         | .0350         |
| 5-25                                                                                                                                                                            | .05               | T               | :43                          | 1.47              | .46           | :24               | .238         | .0480         |
| 5-28                                                                                                                                                                            | .06               | 0               | :50                          | 2.06              | .70           | :26               | .301         | .0570         |
| 5-29                                                                                                                                                                            | 0                 | T               | :53                          | 4.00              | .90           | :36               | .580         | .1310         |
| 6-2                                                                                                                                                                             | .98               | .0378           | 12:01p                       | 3.00              | 1.30          | :41               | .664         | .1826         |
| 6-3                                                                                                                                                                             | .16               | .0368           | :04                          | 1.80              | 1.39          | :50               | .716         | .1857         |
| 6-4,5                                                                                                                                                                           | 0                 | .0017           | :17                          | .88               | 1.58          | 1:00              | .747         | .4081         |
| 6-6                                                                                                                                                                             | 1.49              | .3237           | :22                          | .24               | 1.60          | :08               | .722         | .5057         |
| 6-7                                                                                                                                                                             | .04               | .2761           | :25                          | 0                 | 1.60          | :15               | .676         | .5870         |
| 6-8                                                                                                                                                                             | 0                 | .0025           | :27                          | .60               | 1.62          | :25               | .606         | .6933         |
| 6-9                                                                                                                                                                             | .54               | .0673           | :30                          | 0                 | 1.62          | :45               | .448         | .8676         |
|                                                                                                                                                                                 |                   |                 | :34                          | .30               | 1.64          | :55               | .388         | .9369         |
|                                                                                                                                                                                 |                   |                 | :38                          | 0                 | 1.64          | 2:05              | .333         | .9967         |
|                                                                                                                                                                                 |                   |                 | :44                          | .20               | 1.66          | :30               | .224         | 1.1116        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | :45               | .175         | 1.1603        |
|                                                                                                                                                                                 |                   |                 | R. G.                        | 2                 | 1.62          | 3:15              | .111         | 1.2318        |
|                                                                                                                                                                                 |                   |                 | R. G.                        | 31                | 1.66          | 4:00              | .0528        | 1.2898        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | :55               | .0261        | 1.3248        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 6:00              | .0109        | 1.3432        |
|                                                                                                                                                                                 |                   |                 | Weighted Average <u>2/</u>   |                   | 1.65          | :30               | .0083        | 1.3480        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 10:40             | .0023        | 1.3659        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 11:59             | .0017        | 1.3685        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 6-11-41           |              |               |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 1:30a             | .0013        | 1.3708        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 4:15              | .0009        | 1.3739        |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | 11:30             | .0004        | 1.3787        |
| <u>Event of June 15, 1942</u>                                                                                                                                                   |                   |                 |                              |                   |               |                   |              |               |
| 5-18-42                                                                                                                                                                         | .26               | T               | 6-15-42                      | Raingage          | 14            | 6-15-42           |              |               |
| 5-19                                                                                                                                                                            | .68               | .0295           | 4:37a                        | 0                 | 0             | 4:54a             | .0004        | 0             |
| 5-20,22                                                                                                                                                                         | 0                 | .0021           | :47                          | 2.28              | .38           | 5:01              | .0131        | .0008         |
| 5-23                                                                                                                                                                            | .95               | .2092           | :53                          | 3.10              | .69           | :03               | .0222        | .0014         |
| 5-24,27                                                                                                                                                                         | 0                 | .0136           | :57                          | 1.50              | .79           | :08               | .0516        | .0044         |
| 6-5                                                                                                                                                                             | 2.16              | .5086           | 5:04                         | .60               | .86           | :13               | .100         | .0108         |
| 6-6                                                                                                                                                                             | .17               | .0818           | :08                          | 1.05              | .93           | :24               | .152         | .0340         |
| 6-7                                                                                                                                                                             | .15               | .0072           | :12                          | .60               | .97           | :36               | .238         | .0721         |
| 6-8                                                                                                                                                                             | .01               | .0016           | :18                          | .30               | 1.00          | :40               | .276         | .0892         |
| 6-9                                                                                                                                                                             | .12               | .0029           | :31                          | .09               | 1.02          | :44               | .296         | .1082         |
| 6-10                                                                                                                                                                            | .46               | .0451           | :59                          | .02               | 1.03          | :51               | .312         | .1435         |
| 6-11                                                                                                                                                                            | 1.86              | 1.2230          | 6:12                         | .18               | 1.07          | :59               | .322         | .1856         |
| 6-12,13                                                                                                                                                                         | 0                 | .0176           | :33                          | 0                 | 1.07          | 6:16              | .307         | .2744         |
| 6-14                                                                                                                                                                            | 1.36              | .7491           | :48e                         | .08               | 1.09          | :42               | .281         | .4012         |
|                                                                                                                                                                                 |                   |                 |                              |                   |               | :52               | .247         | .4449         |
| Notes: To convert runoff in in/hr to cfs multiply by <u>1119.25</u> .<br><u>1/</u> Watershed map included with Riesel (Waco), Texas, Watershed J.<br><u>2/</u> Thiessen Method. |                   |                 |                              |                   |               |                   |              |               |



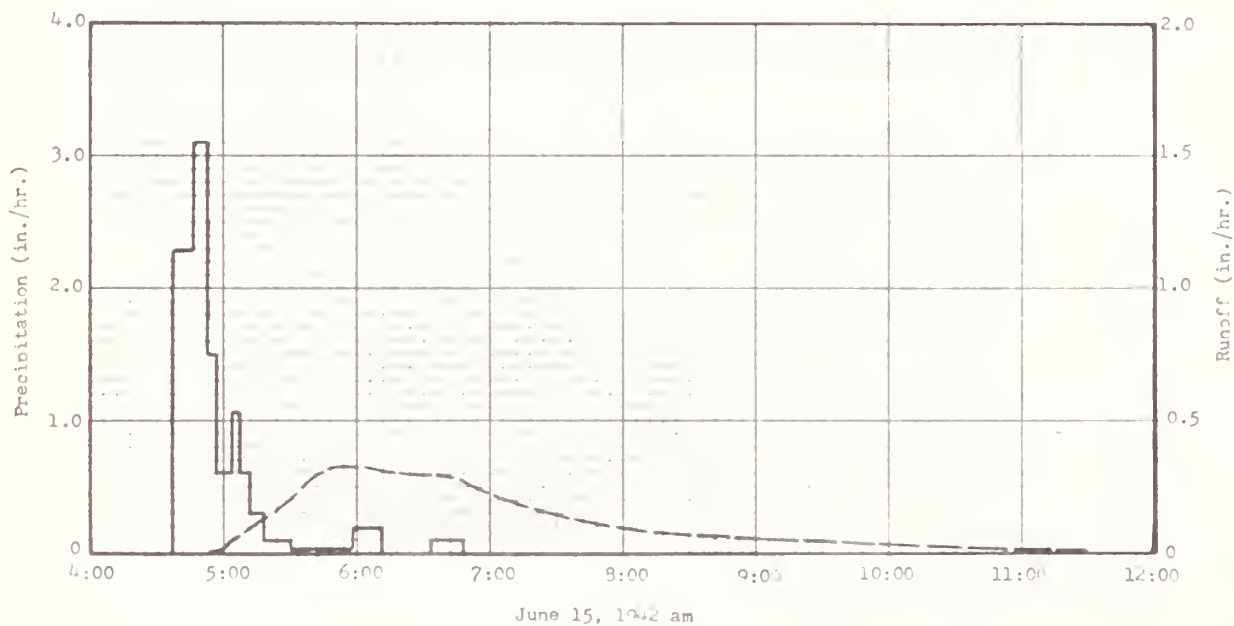
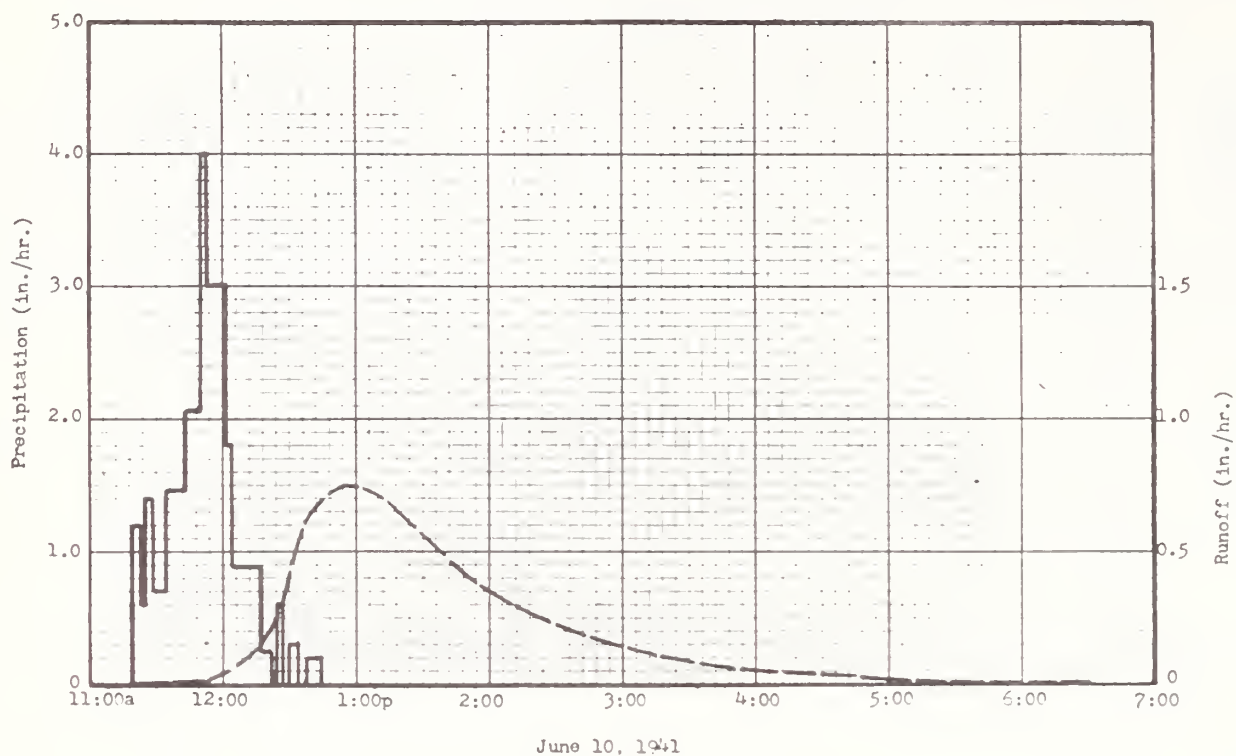
| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                |                      |                    | Watershed D                            |                       |                  | (42.3)           |                 |                  | Area - 1110 acres |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------------------|-----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions'                                                                                                                                                                                                                                                                                              |                      |                    | Rainfall                               |                       |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time                       | Intensity<br>(in/hr)  | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | <u>Event of June 15, 1942, Cont'd.</u> |                       |                  |                  |                 |                  |                   |  |  |
| <u>Watershed Conditions:</u> 30% of area in cotton at early fruiting stage, 23% in corn at tassel stage, 14% in pasture, 13% in Johnson grass, 5% in broadcast grain sorghum, 2% in row grain sorghum, 4% in broadcast millet and sudan, 2% in oats stubble, 3% in miscellaneous crops, 4% in farmsteads and roads. |                      |                    | R. G.                                  | 5                     | .93              | 7:03             | .213            | .4869            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | R. G.                                  | 31                    | .95              | :23              | .155            | .5476            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | :46              | .111            | .5984            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | Weighted                               | Average $\frac{1}{2}$ | 1.01             | 8:15             | .0771           | .6437            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | :49              | .0516           | .6796            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 9:30             | .0348           | .7088            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 10:43            | .0148           | .7374            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 11:30            | .0098           | .7468            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 12:25p           | .0073           | .7545            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 3:30             | .0036           | .7712            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 8:00             | .0014           | .7818            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 11:59            | .0008           | .7860            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 6-16-42          |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 3:30a            | .0006           | .7883            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 7:00             | .0004           | .7900            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | <u>Event of July 15, 1950</u>          |                       |                  |                  |                 |                  |                   |  |  |
| 6-21                                                                                                                                                                                                                                                                                                                | .44                  | 0                  | 7-15-50                                | Raingage              | 14               | 7-15-50          |                 |                  |                   |  |  |
| 6-29                                                                                                                                                                                                                                                                                                                | .10                  | 0                  | 3:18a                                  | 0                     | 0                | 6:08a            | 0               | 0                |                   |  |  |
| 7-6                                                                                                                                                                                                                                                                                                                 | .12                  | 0                  | :22                                    | .60                   | .04              | :46              | .0093           | .0011            |                   |  |  |
| 7-10                                                                                                                                                                                                                                                                                                                | .25                  | 0                  | :32                                    | .12                   | .06              | :50              | .0116           | .0018            |                   |  |  |
| 7-11                                                                                                                                                                                                                                                                                                                | .05                  | 0                  | 5:20a                                  | 0                     | .06              | :54              | .0235           | .0029            |                   |  |  |
| 7-13                                                                                                                                                                                                                                                                                                                | 2.16                 | .2519              | :29                                    | .07                   | .07              | 7:00             | .0570           | .0070            |                   |  |  |
| 7-14                                                                                                                                                                                                                                                                                                                | 0                    | .0005              | :33                                    | .30                   | .09              | :06              | .0891           | .0143            |                   |  |  |
| <u>Watershed Conditions:</u> 42% of the area in cultivated terraced land, 36% in pasture, 10% in cultivated straight rows, 9% in cultivated contour rows, 3% in farmsteads and roads.                                                                                                                               |                      |                    | 6:02                                   | 0                     | .09              | :14              | .1346           | .0290            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :06                                    | .30                   | .11              | :20              | .2009           | .0459            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :10                                    | 1.05                  | .18              | :22              | .251            | .0534            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :15                                    | 2.28                  | .37              | :26              | .333            | .0728            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :18                                    | .80                   | .41              | :32              | .453            | .1121            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :23                                    | 1.68                  | .55              | :36              | .504            | .1439            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :34                                    | .55                   | .65              | :44              | .536            | .2129            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :42                                    | 1.35                  | .83              | 8:00             | .469            | .3463            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :51                                    | .33                   | .88              | :12              | .399            | .4328            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :58                                    | 0                     | .88              | :32              | .292            | .5473            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | 7:00                                   | 1.20                  | .92              | :42              | .233            | .5909            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :08                                    | 4.12                  | 1.47             | 9:00             | .168            | .6507            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :12                                    | 1.65                  | 1.58             | :12              | .137            | .6811            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :17                                    | 2.16                  | 1.73             | :42              | .0870           | .7367            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :28                                    | .44                   | 1.81             | 10:00            | .0614           | .7590            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | :44                                    | .11                   | 1.84             | :38              | .0314           | .7871            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | 8:42                                   | 0                     | 1.84             | 11:00            | .0222           | .7963            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | 9:39e                                  | .04                   | 1.88             | 12:00            | .0116           | .8128            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | R. G.                                  | 5                     | 2.01             | 1:00p            | .0075           | .8220            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | R. G.                                  | 20                    | 2.02             | 3:00             | .0036           | .8328            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 7:00             | .0009           | .8407            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    |                                        |                       |                  | 11:59            | .0002           | .8431            |                   |  |  |
|                                                                                                                                                                                                                                                                                                                     |                      |                    | Weighted                               | Average $\frac{1}{2}$ | 1.97             |                  |                 |                  |                   |  |  |

Notes: To convert runoff in in/hr to cfs multiply by 1119.25.  
 $\frac{1}{2}$  Thiessen Method.

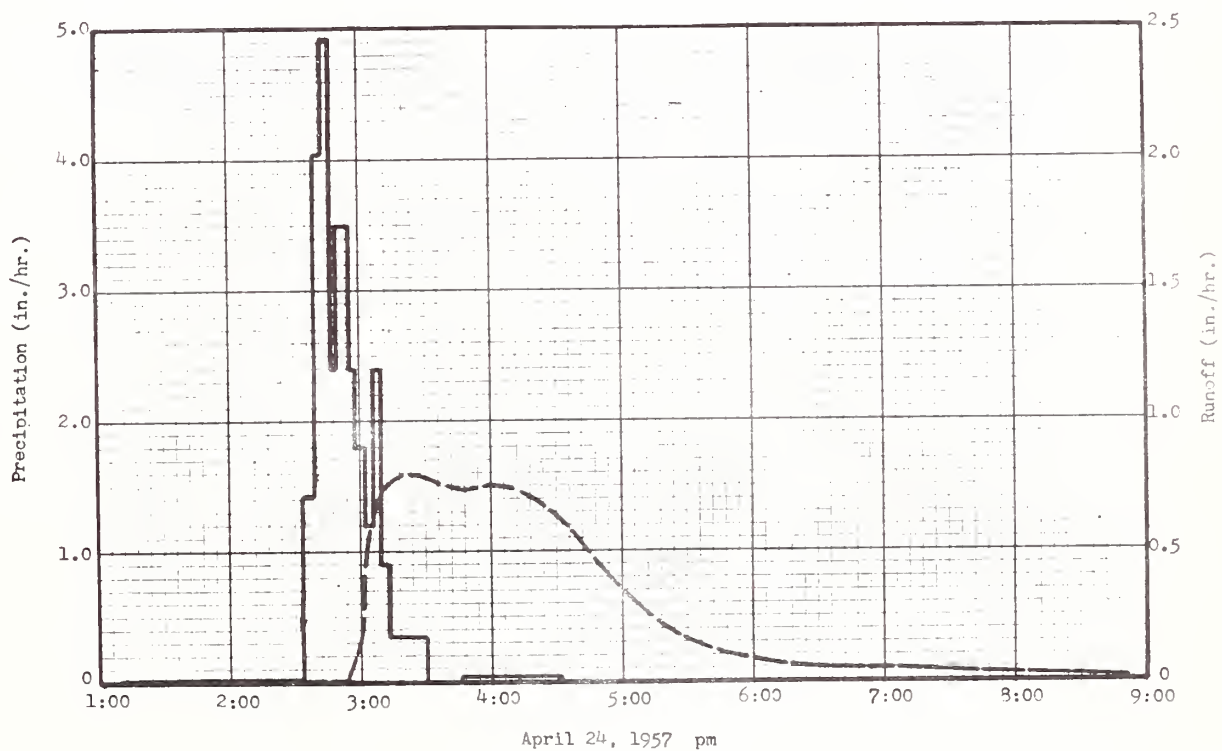
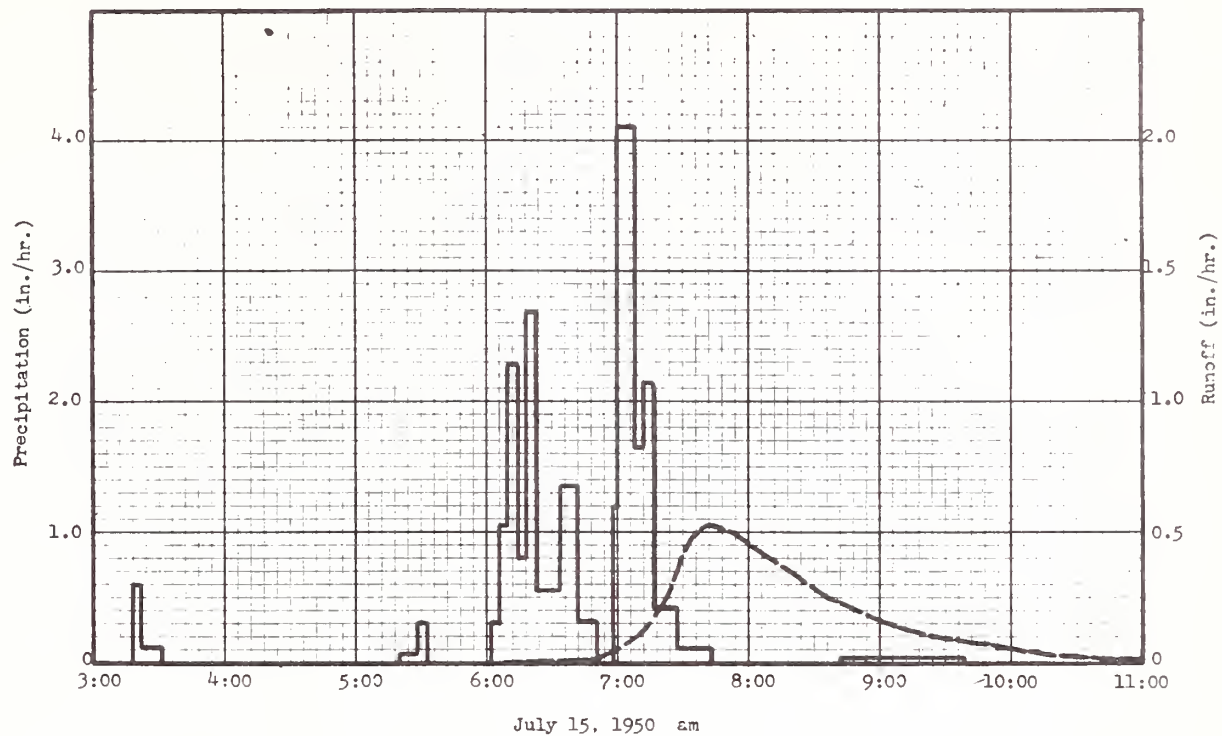
Notes: To convert runoff in in/hr to cfs multiply by 1119.25.  
 $\frac{1}{2}$  Thiessen Method.

| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                    |                   |                 | Watershed D (42.3)             |                   |               | Area - 1110 acres |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                   |                   |                 | Rainfall                       |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                                                                                                                                                    | Rainfall (inches) | Runoff (inches) | Date and time                  | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| <u>Event of April 24, 1957</u>                                                                                                                                                                                                                                                                                          |                   |                 |                                |                   |               |                   |              |               |
| 3-24-57                                                                                                                                                                                                                                                                                                                 | 0                 | T               | 4-24-57                        | Raingage          | 14            | 4-24-57           |              |               |
| 3-27                                                                                                                                                                                                                                                                                                                    | 1.18              | .3567           | 1:09p                          | 0                 | 0             | 2:34p             | .0006        | 0             |
| 3-28,30                                                                                                                                                                                                                                                                                                                 | 0                 | .0451           | 2:34                           | .01               | .02           | :53               | .0155        | .0008         |
| 3-31                                                                                                                                                                                                                                                                                                                    | 1.16              | .4546           | :39                            | 1.44              | .14           | :55               | .0366        | .0017         |
| 4-1,2                                                                                                                                                                                                                                                                                                                   | 0                 | .0559           | :43                            | 4.05              | .41           | :57               | .0771        | .0035         |
| 4-3                                                                                                                                                                                                                                                                                                                     | .14               | .0012           | :47                            | 4.95              | .74           | 3:00              | .186         | .0098         |
| 4-4                                                                                                                                                                                                                                                                                                                     | .12               | .0013           | :49                            | 2.40              | .86           | :04               | .549         | .0308         |
| 4-5,7                                                                                                                                                                                                                                                                                                                   | 0                 | .0058           | :55                            | 3.50              | 1.21          | :06               | .632         | .0489         |
| 4-8                                                                                                                                                                                                                                                                                                                     | .02               | T               | :58                            | 2.40              | 1.33          | :10               | .735         | .0943         |
| 4-13                                                                                                                                                                                                                                                                                                                    | .05               | 0               | 3:02                           | 1.80              | 1.45          | :14               | .779         | .1445         |
| 4-15                                                                                                                                                                                                                                                                                                                    | .05               | 0               | :06                            | 1.20              | 1.53          | :22               | .797         | .2491         |
| 4-19                                                                                                                                                                                                                                                                                                                    | 5.60              | 2.1179          | :09                            | 2.40              | 1.65          | :36               | .760         | .4200         |
| 4-20                                                                                                                                                                                                                                                                                                                    | .33               | .7455           | :13                            | .90               | 1.71          | :44               | .735         | .5292         |
| 4-21                                                                                                                                                                                                                                                                                                                    | .38               | .1172           | :30                            | .35               | 1.81          | 4:02              | .760         | .7525         |
| 4-22                                                                                                                                                                                                                                                                                                                    | .33               | .1111           | :46                            | 0                 | 1.81          | :14               | .735         | .9013         |
| 4-23                                                                                                                                                                                                                                                                                                                    | 3.65              | 3.7184          | 4:32                           | .05               | 1.85          | :24               | .683         | 1.0190        |
| <u>Watershed Conditions:</u> 33% of the area in corn 10" high, 24% in pasture, 17% bedded for cotton (no crop growing), 9% in row grain sorghum 4" high, 7% in sweet clover 12" high, 4% in broadcast grain sorghum, 2% in oats-clover with oats in bloom stage, 1% in oats in bloom stage, 3% in farmsteads and roads. |                   |                 |                                |                   |               | :30               | .632         | 1.0845        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 | R. G.                          | 5                 | 1.65          | :37               | .580         | 1.1549        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 | R. G.                          | 20                | 1.64          | :50               | .437         | 1.2642        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 | Weighted Average $\frac{1}{1}$ |                   |               | :50               | .307         | 1.3626        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :16               | .233         | 1.4075        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :26               | .175         | 1.4419        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :41               | .1265        | 1.4785        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 6:00              | .0891        | 1.5019        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :34               | .0631        | 1.5540        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :54               | .0516        | 1.5739        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 7:32              | .0348        | 1.6007        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 8:20              | .0229        | 1.6235        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | :50               | .0183        | 1.6337        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 10:34             | .0098        | 1.6574        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 11:59             | .0065        | 1.6685        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 4-25-57           |              |               |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 2:38a             | .0036        | 1.6814        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 6:32              | .0019        | 1.6916        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 12:32p            | .0010        | 1.6999        |
|                                                                                                                                                                                                                                                                                                                         |                   |                 |                                |                   |               | 6:43              | .0005        | 1.7046        |

Notes: To convert runoff in in/hr to cfs multiply by 1119.25  
1/ Thiessen Method



RIESEL (WACO), TEXAS WATERSHED D



RIESEL (WACO), TEXAS WATERSHED D





| Riesel (Waco), Texas                                                                                                                                                                                                                                 |                      |                    | Watershed J         |                      |                  | (42.5)           |                 |                  | Area - 5860 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                |                      |                    | Rainfall            |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time    | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of March 23, 1941                                                                                                                                                                                                                              |                      |                    |                     |                      |                  |                  |                 |                  |                   |  |  |
| 2-20-41                                                                                                                                                                                                                                              | 0                    | .0010              | 3-23-41             | Raingage             | 66               | 3-23-41          |                 |                  |                   |  |  |
| 2-21                                                                                                                                                                                                                                                 | .55                  | .0017              | 1:54a               | 0                    | 0                | 2:07a            | .0001           | 0                |                   |  |  |
| 2-22                                                                                                                                                                                                                                                 | .22                  | .0202              | 2:01                | .26                  | .03              | :22              | .0011           | .0001            |                   |  |  |
| 2-23                                                                                                                                                                                                                                                 | 1.63                 | 1.0732             | :03                 | 0                    | .03              | :30              | .0069           | .0006            |                   |  |  |
| 2-24                                                                                                                                                                                                                                                 | .04                  | .1134              | :09                 | .50                  | .08              | :37              | .0099           | .0016            |                   |  |  |
| 2-25                                                                                                                                                                                                                                                 | 0                    | .0114              | :12                 | 1.20                 | .14              | :52              | .0134           | .0045            |                   |  |  |
| 2-26                                                                                                                                                                                                                                                 | T                    | .0048              | :15                 | 0                    | .14              | :57              | .0156           | .0057            |                   |  |  |
| 2-27,28                                                                                                                                                                                                                                              | 0                    | .0072              | :23                 | .22                  | .17              | 3:02             | .0184           | .0071            |                   |  |  |
| 3-1,4                                                                                                                                                                                                                                                | 0                    | .0065              | :33                 | .78                  | .30              | :07              | .0225           | .0088            |                   |  |  |
| 3-5                                                                                                                                                                                                                                                  | .26                  | .0011              | :41                 | .15                  | .32              | :15              | .0291           | .0122            |                   |  |  |
| 3-6                                                                                                                                                                                                                                                  | 1.31                 | .6287              | :50e                | .07                  | .33              | :25              | .0342           | .0175            |                   |  |  |
| 3-7                                                                                                                                                                                                                                                  | .07                  | .0591              |                     |                      |                  | :29              | .0352           | .0198            |                   |  |  |
| 3-8,11                                                                                                                                                                                                                                               | 0                    | .0144              | 3-23-41             | Raingage             | 14               | :34              | .0360           | .0227            |                   |  |  |
| 3-12                                                                                                                                                                                                                                                 | .02                  | .0009              | 1:40a               | 0                    | 0                | :39              | .0367           | .0258            |                   |  |  |
| 3-13,16                                                                                                                                                                                                                                              | 0                    | .0030              | :48                 | 1.80                 | .24              | :45              | .0371           | .0295            |                   |  |  |
| 3-17                                                                                                                                                                                                                                                 | .91                  | .0066              | :52                 | 1.05                 | .31              | :49              | .0372           | .0307            |                   |  |  |
| 3-18                                                                                                                                                                                                                                                 | .15                  | .1220              | 2:06                | .56                  | .44              | :53              | .0362           | .0344            |                   |  |  |
| 3-19                                                                                                                                                                                                                                                 | 0                    | .0085              | :14                 | 0                    | .44              | 4:02             | .0352           | .0397            |                   |  |  |
| 3-20                                                                                                                                                                                                                                                 | .06                  | .0060              | :22                 | .30                  | .48              | :11              | .0338           | .0449            |                   |  |  |
| 3-21,22                                                                                                                                                                                                                                              | 0                    | .0071              | :24                 | 0                    | .48              | :21              | .0328           | .0505            |                   |  |  |
| <u>Watershed Conditions:</u> 66%<br>of the area bedded for row<br>crops (no crop growing), 13%<br>in pasture, 5% in oats, 5%<br>idle cropland, 4% fallow, 3%<br>in native grass meadow, 1%<br>miscellaneous crops and 3% in<br>farmsteads and roads. |                      |                    | :34                 | .18                  | .51              | :41              | .0306           | .0610            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | 6:20                | 0                    | .51              | 5:01             | .0281           | .0708            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :40e                | .03                  | .52              | :51              | .0223           | .0917            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | 3-23-41             | Raingage             | 107              | 7:02             | .0173           | .1144            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    |                     |                      |                  | 8:45             | .0146           | .1416            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | 2:00a               | 0                    | 0                | 10:30            | .0100           | .1634            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :06                 | .40                  | .04              | 11:15            | .0075           | .1700            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :12                 | 3.20                 | .36              | 12:00            | .0053           | .1747            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :15                 | 4.00                 | .56              | 1:45p            | .0025           | .1811            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :21                 | 1.20                 | .68              | 3:45             | .0015           | .1851            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :33                 | .70                  | .82              | 11:59p           | .0006           | .1928            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :41                 | .30                  | .86              | 3-24-41          |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | :45e                | .45                  | .89              | 11:59p           | .0001           | .2000            |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 5                    | .36              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 27                   | .57              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 31                   | .51              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 44                   | .40              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 55                   | .33              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 70                   | .48              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 82                   | .75              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 85                   | .58              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | R.G.                | 94                   | .62              |                  |                 |                  |                   |  |  |
|                                                                                                                                                                                                                                                      |                      |                    | Weighted Average 1/ |                      | .51              |                  |                 |                  |                   |  |  |
| Event of June 10, 1941                                                                                                                                                                                                                               |                      |                    |                     |                      |                  |                  |                 |                  |                   |  |  |
| 5-10-41                                                                                                                                                                                                                                              | 0                    | .0007              | 6-10-41             | Raingage             | 66               | 6-10-41          |                 |                  |                   |  |  |
| 5-11                                                                                                                                                                                                                                                 | .03                  | .0006              | 11:30a              | 0                    | 0                | 11:35a           | .0006           | 0                |                   |  |  |
| 5-12,16                                                                                                                                                                                                                                              | 0                    | .0014              | :34                 | .45                  | .03              | :48              | .0010           | .0001            |                   |  |  |

Notes: To convert runoff in in/hr to cfs multiply by, 5908.81  
1/ Thiessen Method.

| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                                                  |                   |                 | Watershed J (42.5) |                   |               | Area - 5860 acres |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                 |                   |                 | Rainfall           |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                  | Rainfall (inches) | Runoff (inches) | Date and time      | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of June 10, 1941, Cont'd.                                                                                                                                                                                                                                                                                                                       |                   |                 |                    |                   |               |                   |              |               |
| 5-17                                                                                                                                                                                                                                                                                                                                                  | .01               | .0001           | :40                | 2.20              | .25           | :54               | .0026        | .0003         |
| 5-18                                                                                                                                                                                                                                                                                                                                                  | 0                 | .0001           | :46                | 1.80              | .43           | 12:00             | .0135        | .0010         |
| 5-19                                                                                                                                                                                                                                                                                                                                                  | 1.74              | .1902           | :51                | 3.84              | .75           | :06p              | .0320        | .0033         |
| 5-20                                                                                                                                                                                                                                                                                                                                                  | .69               | .3990           | :54                | 4.80              | .97           | :12               | .0477        | .0074         |
| 5-21                                                                                                                                                                                                                                                                                                                                                  | .03               | .0637           | :59                | 4.56              | 1.35          | :18               | .0603        | .0128         |
| 5-22                                                                                                                                                                                                                                                                                                                                                  | .32               | .1088           | 12:02p             | 3.20              | 1.51          | :24               | .0784        | .0197         |
| 5-23,24                                                                                                                                                                                                                                                                                                                                               | 0                 | .0363           | :03                | 2.50              | 1.76          | :30               | .0970        | .0284         |
| 5-25                                                                                                                                                                                                                                                                                                                                                  | .11               | .0016           | :13                | 1.14              | 1.95          | :36               | .1117        | .0389         |
| 5-26,27                                                                                                                                                                                                                                                                                                                                               | 0                 | .0028           | :21                | .40               | 1.97          | :42               | .1239        | .0507         |
| 5-28                                                                                                                                                                                                                                                                                                                                                  | .01               | .0003           | :24                | 0                 | 1.97          | :48               | .1354        | .0637         |
| 5-29                                                                                                                                                                                                                                                                                                                                                  | .08               | .0002           | :31                | .34               | 2.01          | :54               | .1450        | .0777         |
| 5-30,31                                                                                                                                                                                                                                                                                                                                               | 0                 | .0002           | :35                | 0                 | 2.01          | 1:00              | .1538        | .0927         |
| 6-1                                                                                                                                                                                                                                                                                                                                                   | 0                 | .0001           | :44                | .27               | 2.05          | :05               | .1599        | .1058         |
| 6-2                                                                                                                                                                                                                                                                                                                                                   | 1.22              | .0597           | 1 :44 e            | .02               | 2.07          | :14               | .1706        | .1305         |
| 6-3                                                                                                                                                                                                                                                                                                                                                   | .13               | .1318           |                    |                   |               | :21               | .1769        | .1503         |
| 6-4,5                                                                                                                                                                                                                                                                                                                                                 | 0                 | .0037           | 6-10-41            | Raingage          | 5             | :27               | .1818        | .1688         |
| 6-6                                                                                                                                                                                                                                                                                                                                                   | 1.09              | .0230           | 11:16a             | 0                 | 0             | :35               | .1872        | .1933         |
| 6-7                                                                                                                                                                                                                                                                                                                                                   | .05               | .3026           | :22                | 1.70              | .17           | :45               | .1946        | .2251         |
| 6-8                                                                                                                                                                                                                                                                                                                                                   | 0                 | .0063           | :27                | 1.20              | .27           | :50               | .2011        | .2416         |
| 6-9                                                                                                                                                                                                                                                                                                                                                   | .41               | .0268           | :33                | .70               | .34           | :55               | .2056        | .2586         |
| Watershed Conditions: 27% of the area in cotton at early fruiting stage, 26% in corn at tassel stage, 13% in pasture, 5% in oats stubble, 5% idle cropland, 4% fallow, 4% in sorghum at booting stage, 4% in hegari at booting stage, 3% in sudan, 2% in millet, 3% in native grass meadow, 1% in miscellaneous crops and 3% in farmsteads and roads. |                   |                 | :38                | 1.92              | .50           | 2:00              | .2141        | .2760         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :45                | 1.71              | .70           | :05               | .2217        | .2942         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :51                | 1.90              | .89           | :10               | .2250        | .3129         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :53                | 2.93              | 1.13          | :15               | .2278        | .3313         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | 12:01p             | 2.00              | 1.23          | :25               | .2231        | .3697         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :14                | .65               | 1.42          | :30               | .2268        | .3887         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :19                | .30               | 1.44          | :40               | .2251        | .4264         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :21                | 0                 | 1.44          | :50               | .2209        | .4636         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :23                | .60               | 1.46          | 3:00              | .2107        | .4996         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :40e               | .14               | 1.50          | :10               | .2039        | .5341         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 |                    |                   |               | :20               | .1989        | .5677         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 |                    |                   |               | :40               | .1853        | .6317         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | 6-10-41            | Raingage          | 107           | 4:00              | .1769        | .6921         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | 11:30a             | 0                 | 0             | :20               | .1675        | .7495         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :34                | 1.20              | .03           | :40               | .1599        | .8040         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :40                | 1.90              | .27           | 5:00              | .1528        | .8562         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :49                | 3.27              | .76           | :20               | .1461        | .9060         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :56                | 5.06              | 1.35          | :40               | .1371        | .9532         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | 12:03p             | 3.43              | 1.75          | 6:00              | .1293        | .9974         |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :10                | 1.46              | 1.92          | :30               | .1159        | 1.0585        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :15                | .72               | 1.73          | 7:00              | .1015        | 1.1130        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :23                | .30               | 2.02          | :30               | .0941        | 1.1594        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :32                | .13               | 2.04          | 8:00              | .0709        | 1.1979        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :38                | .40               | 2.03          | :30               | .0592        | 1.2303        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :50e               | .10               | 2.10          | 9:00              | .0431        | 1.2571        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 |                    |                   |               | :30               | .0376        | 1.2784        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | R. G.              | 14                | 1.66          | 10:00             | .0284        | 1.2949        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | R. G.              | 27                | 1.70          | :30               | .0213        | 1.3073        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | R.G.               | 31                | 1.66          | 11:00             | .0164        | 1.3168        |
|                                                                                                                                                                                                                                                                                                                                                       |                   |                 | R. G.              | 44                | 1.85          | :30               | .0130        | 1.3241        |

Notes: To convert runoff in in/hr to cfs multiply by 5908.81

| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                                        |                   |                 | Watershed J (42.5)          |                   |               | Area - 5860 acres    |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|-----------------------------|-------------------|---------------|----------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                       |                   |                 | Rainfall                    |                   |               | Runoff               |              |               |
| Date                                                                                                                                                                                                                                                                                                                                        | Rainfall (inches) | Runoff (inches) | Date and time               | Intensity (in/hr) | Acc. (inches) | Date and time        | Rate (in/hr) | Acc. (inches) |
| Event of June 10, 1941, Cont'd.                                                                                                                                                                                                                                                                                                             |                   |                 |                             |                   |               |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 55                | 1.80          | 12:00m               | .0090        | 1.3297        |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 70                | 2.00          | 6-11-41              |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 82                | 2.29          | 1:00a                | .0038        | 1.3358        |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 85                | 1.98          | 2:00                 | .0023        | 1.3387        |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 94                | 2.30          | 8:00a                | .0010        | 1.3467        |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | Weighted Average <u>1</u> / |                   | 1.90          | 8:00p <sup>2</sup> / | .0005        | 1.3558        |
| Event of June 6, 1942                                                                                                                                                                                                                                                                                                                       |                   |                 |                             |                   |               |                      |              |               |
| 5-6-42                                                                                                                                                                                                                                                                                                                                      | .55               | .0001           | 6-6-42                      | Raingage          | 66            | 6-6-42               |              |               |
| 5-7                                                                                                                                                                                                                                                                                                                                         | 1.33              | .4052           | 6:00a                       | 0                 | 0             | 6:27a                | .0058        | 0             |
| 5-8                                                                                                                                                                                                                                                                                                                                         | T                 | .0100           | :22                         | .07               | .02           | :35                  | .0056        | .0008         |
| 5-9,10                                                                                                                                                                                                                                                                                                                                      | 0                 | .0030           | :26                         | 4.05              | .29           | :46                  | .0075        | .0012         |
| 5-11                                                                                                                                                                                                                                                                                                                                        | .56               | .0013           | :30                         | 1.20              | .37           | :50                  | .0088        | .0025         |
| 5-12                                                                                                                                                                                                                                                                                                                                        | .05               | .0124           | :40                         | .78               | .50           | :56                  | .0124        | .0036         |
| 5-13                                                                                                                                                                                                                                                                                                                                        | .01               | .0021           | :48                         | .30               | .54           | 7:07                 | .0163        | .0062         |
| 5-14                                                                                                                                                                                                                                                                                                                                        | .02               | .0007           | 7:00                        | .10               | .56           | :18                  | .0221        | .0097         |
| 5-15,17                                                                                                                                                                                                                                                                                                                                     | 0                 | .0004           |                             |                   |               | :36                  | .0294        | .0175         |
| 5-18                                                                                                                                                                                                                                                                                                                                        | .12               | .0001           | 6-6-42                      | Raingage          | 5             | :48                  | .0338        | .0238         |
| 5-19                                                                                                                                                                                                                                                                                                                                        | .62               | .0053           | 7:06a                       | 0                 | 0             | 8:06                 | .0394        | .0348         |
| 5-20,21                                                                                                                                                                                                                                                                                                                                     | 0                 | .0043           | :12                         | .80               | .08           | :13                  | .0408        | .0395         |
| 5-22                                                                                                                                                                                                                                                                                                                                        | T                 | .0002           | :16                         | .60               | .12           | :25                  | .0417        | .0477         |
| 5-23                                                                                                                                                                                                                                                                                                                                        | .97               | .1437           | :28                         | .15               | .15           | :37                  | .0408        | .0560         |
| 5-24                                                                                                                                                                                                                                                                                                                                        | .01               | .0158           | :44                         | .08               | .17           | :48                  | .0394        | .0633         |
| 5-25,28                                                                                                                                                                                                                                                                                                                                     | 0                 | .0045           |                             |                   |               | 9:16                 | .0352        | .0807         |
| 5-29                                                                                                                                                                                                                                                                                                                                        | .03               | .0001           | 6-6-42                      | Raingage          | 94            | :43                  | .0325        | .0959         |
| 5-30,31                                                                                                                                                                                                                                                                                                                                     | 0                 | T               | 6:34a                       | 0                 | 0             | 10:03                | .0310        | .1065         |
| 6-1,4                                                                                                                                                                                                                                                                                                                                       | 0                 | T               | :38                         | .60               | .04           | :20                  | .0294        | .1150         |
| 6-5                                                                                                                                                                                                                                                                                                                                         | 2.03              | .3734           | :43                         | 2.40              | .24           | 11:10                | .0221        | .1367         |
| Watershed Conditions: 30% of the area in cotton at early fruiting stage, 26% in corn at tassel stage, 14% in pasture, 7% in oats stubble, 5% in Johnson grass, 4% in native grass meadow, 4% in broadcast grain sorghum, 2% in row grain sorghum, 2% in broadcast millet and sudan, 2% in row millet and sudan, 4% in farmsteads and roads. |                   |                 | :50                         | 3.43              | .64           | :43                  | .0163        | .1472         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | :53                         | .40               | .66           | 12:09p               | .0124        | .1533         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | 7:10                        | .07               | .68           | 1:01                 | .0075        | .1616         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | :49                         | .03               | .69           | :39                  | .0058        | .1659         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 |                             |                   |               | 3:31                 | .0034        | .1747         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 14                | .12           | 4:18                 | .0025        | .1771         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 27                | .15           | 7:08                 | .0014        | .1824         |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 31                | .40           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 44                | .11           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 55                | .61           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 70                | .24           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 82                | .26           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 85                | .30           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | R. G.                       | 107               | .43           |                      |              |               |
|                                                                                                                                                                                                                                                                                                                                             |                   |                 | Weighted Average <u>1</u> / |                   | .34           |                      |              |               |

Notes: To convert runoff in in/hr to cfs multiply by 5908.81

1/ Thiessen Method.

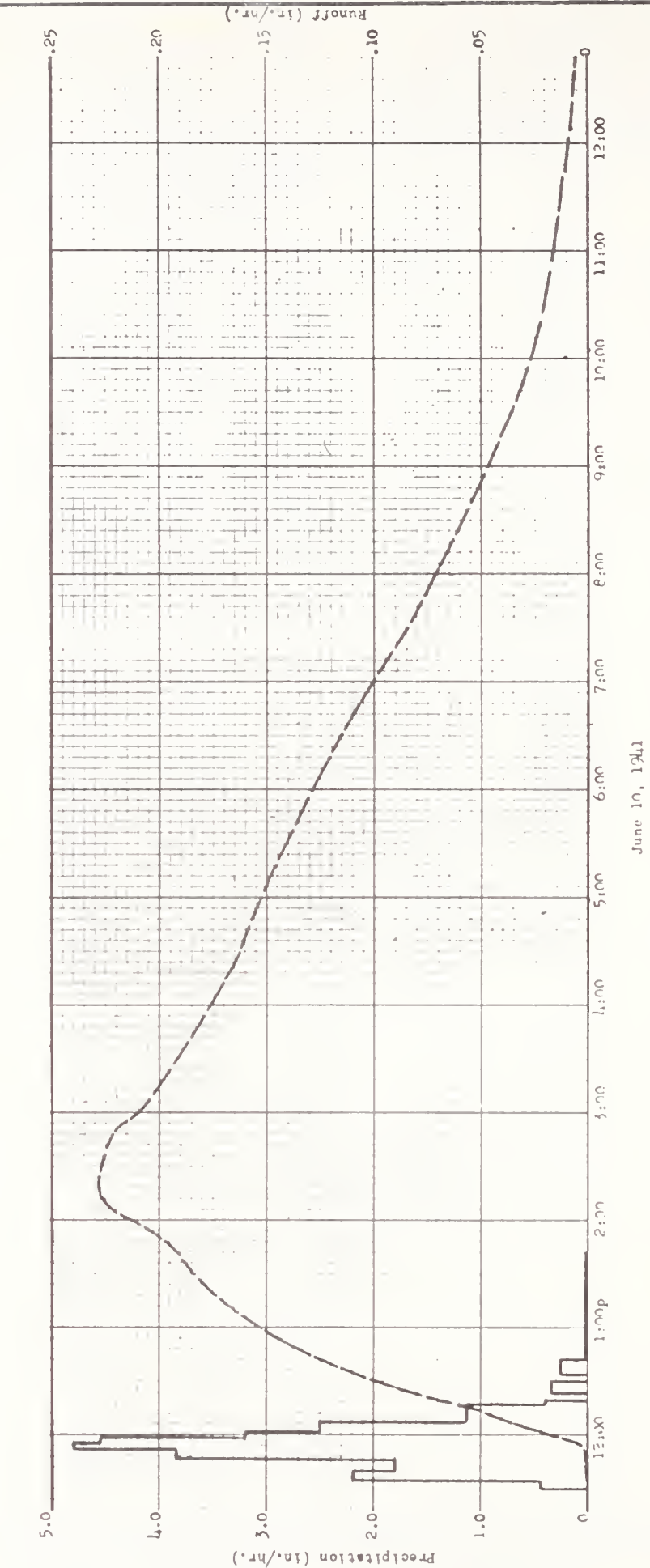
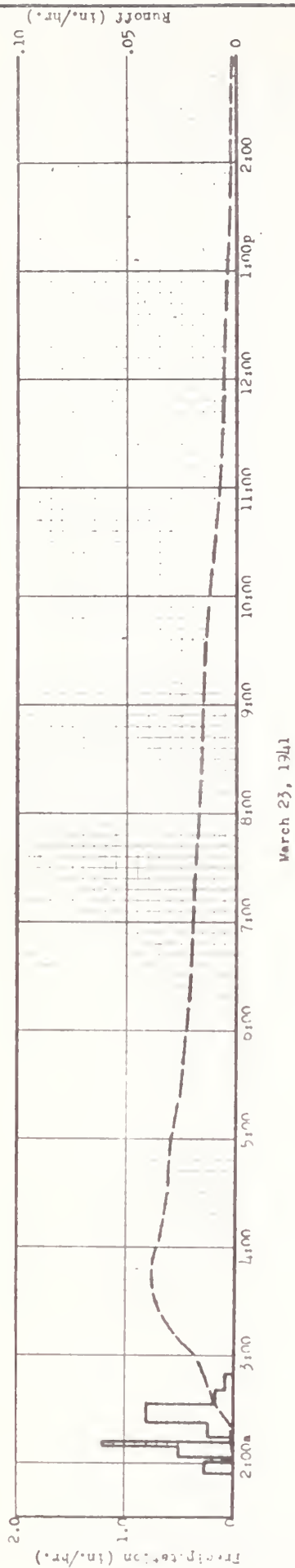
2/ Slowly decreasing flow.



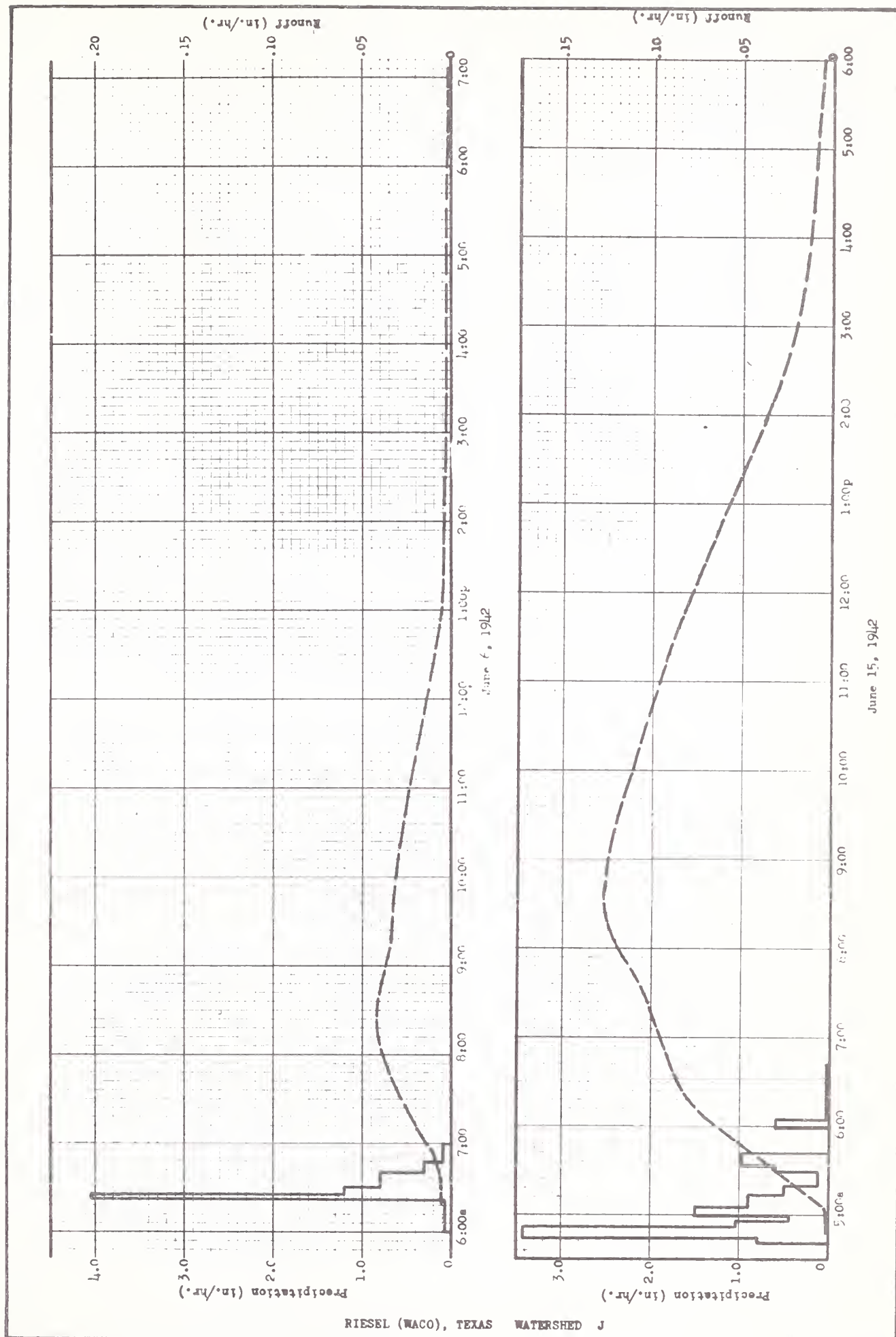
| Riesel (Waco), Texas                                                                                                                               |                   |                 | Watershed J (42.5) |                   |               | Area - 5860 acres |              |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                              |                   |                 | Rainfall           |                   |               | Runoff            |              |               |
| Date                                                                                                                                               | Rainfall (inches) | Runoff (inches) | Date and time      | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| <u>Event of June 15, 1942</u>                                                                                                                      |                   |                 |                    |                   |               |                   |              |               |
| 5-15, 17-42                                                                                                                                        | 0                 | .0004           | 6-15-42            | Raingage          | 66            | 6-15-42           |              |               |
| 5-18                                                                                                                                               | .12               | .0001           | 4:41a              | 0                 | 0             | 4:47a             | .0016        | 0             |
| 5-19                                                                                                                                               | .62               | .0053           | :44                | .80               | .04           | :58               | .0016        | .0003         |
| 5-20, 21                                                                                                                                           | 0                 | .0043           | :52                | 3.45              | .50           | 5:04              | .0025        | .0005         |
| 5-22                                                                                                                                               | T                 | .0002           | :56                | 1.05              | .57           | :09               | .0075        | .0009         |
| 5-23                                                                                                                                               | .97               | .1437           | 5:00               | .45               | .60           | :16               | .0150        | .0023         |
| 5-24                                                                                                                                               | .01               | .0158           | :06                | 1.50              | .75           | :24               | .0244        | .0049         |
| 5-25, 28                                                                                                                                           | 0                 | .0045           | :14                | .90               | .87           | :30               | .0305        | .0077         |
| 5-29                                                                                                                                               | .03               | .0001           | :20                | .50               | .92           | :39               | .0399        | .0130         |
| 5-30, 31                                                                                                                                           | 0                 | T               | :30                | .12               | .94           | :48               | .0504        | .0197         |
| 6-1, 4                                                                                                                                             | 0                 | T               | :34                | .60               | .98           | 6:00              | .0646        | .0312         |
| 6-5                                                                                                                                                | 2.03              | .3734           | :42                | .98               | 1.11          | :12               | .0751        | .0453         |
| 6-6                                                                                                                                                | .40               | .2536           | :59                | 0                 | 1.11          | :25               | .0824        | .0624         |
| 6-7                                                                                                                                                | .52               | .2896           | 6:05               | .60               | 1.17          | :37               | .0872        | .0793         |
| 6-8                                                                                                                                                | T                 | .0482           | :42                | .03               | 1.19          | :52               | .0922        | .1018         |
| 6-9                                                                                                                                                | .03               | .0037           |                    |                   |               | 7:05              | .0963        | .1222         |
| 6-10                                                                                                                                               | .43               | .0555           | 6-15-42            | Raingage          | 5             | :25               | .1029        | .1554         |
| 6-11                                                                                                                                               | 1.95              | 1.4183          | 4:40a              | 0                 | 0             | :37               | .1076        | .1764         |
| 6-12, 13                                                                                                                                           | 0                 | .0205           | :42                | .60               | .02           | :51               | .1138        | .2022         |
| 6-14                                                                                                                                               | 1.09              | .5329           | :47                | 1.68              | .16           | :59               | .1174        | .2176         |
| <u>Watershed Conditions:</u> Same as for the event of June 6, 1942, with no tillage practices possible between June 6 and June 15 due to rainfall. |                   |                 | :52                | 1.20              | .26           | 8:21              | .1253        | .2622         |
|                                                                                                                                                    |                   |                 | :59                | 2.06              | .50           | :48               | .1261        | .3188         |
|                                                                                                                                                    |                   |                 | 5:01               | 1.50              | .55           | 9:22              | .1208        | .3887         |
|                                                                                                                                                    |                   |                 | :08                | .51               | .61           | :58               | .1120        | .4586         |
|                                                                                                                                                    |                   |                 | :13                | 1.20              | .71           | 10:38             | .1026        | .5301         |
|                                                                                                                                                    |                   |                 | :19                | .40               | .75           | 11:20             | .0917        | .5981         |
|                                                                                                                                                    |                   |                 | :25                | .20               | .77           | :43               | .0844        | .6318         |
|                                                                                                                                                    |                   |                 | :44                | .13               | .79           | 12:04p            | .0778        | .6602         |
|                                                                                                                                                    |                   |                 | 6:00               | 0                 | .79           | :36               | .0663        | .6988         |
|                                                                                                                                                    |                   |                 | :06                | .80               | .87           | :59               | .0575        | .7226         |
|                                                                                                                                                    |                   |                 | :11                | .24               | .89           | 1:27              | .0474        | .7471         |
|                                                                                                                                                    |                   |                 | :18                | .17               | .91           | 2:11              | .0322        | .7760         |
|                                                                                                                                                    |                   |                 | :34                | 0                 | .91           | 3:03              | .0204        | .7986         |
|                                                                                                                                                    |                   |                 | :40                | .20               | .93           | :37               | .0152        | .8086         |
|                                                                                                                                                    |                   |                 | 6-15-42            | Raingage          | 70            | 4:08              | .0125        | .8157         |
|                                                                                                                                                    |                   |                 | 4:43a              | 0                 | 0             | 5:26              | .0075        | .8288         |
|                                                                                                                                                    |                   |                 | :45                | .30               | .01           | 6:20              | .0042        | .8338         |
|                                                                                                                                                    |                   |                 | :47                | 1.80              | .07           | 11:59p            | .0019        | .8491         |
|                                                                                                                                                    |                   |                 | :54                | 2.60              | .44           | 6-16-42           |              |               |
|                                                                                                                                                    |                   |                 | 5:02               | .75               | .54           | 6:10p             | .0003        | .8631         |
|                                                                                                                                                    |                   |                 | :10                | 1.40              | .76           |                   |              |               |
|                                                                                                                                                    |                   |                 | :15                | .84               | .83           |                   |              |               |
|                                                                                                                                                    |                   |                 | :17                | 0                 | .83           |                   |              |               |
|                                                                                                                                                    |                   |                 | :20                | .80               | .87           |                   |              |               |
|                                                                                                                                                    |                   |                 | :26                | .20               | .89           |                   |              |               |
|                                                                                                                                                    |                   |                 | :29                | 0                 | .89           |                   |              |               |
|                                                                                                                                                    |                   |                 | :34                | .48               | .93           |                   |              |               |
|                                                                                                                                                    |                   |                 | :38                | 1.20              | 1.01          |                   |              |               |
|                                                                                                                                                    |                   |                 | :41                | .80               | 1.05          |                   |              |               |
|                                                                                                                                                    |                   |                 | :44                | .40               | 1.07          |                   |              |               |

Notes: To convert runoff in in/hr to cfs multiply by 5908.81.

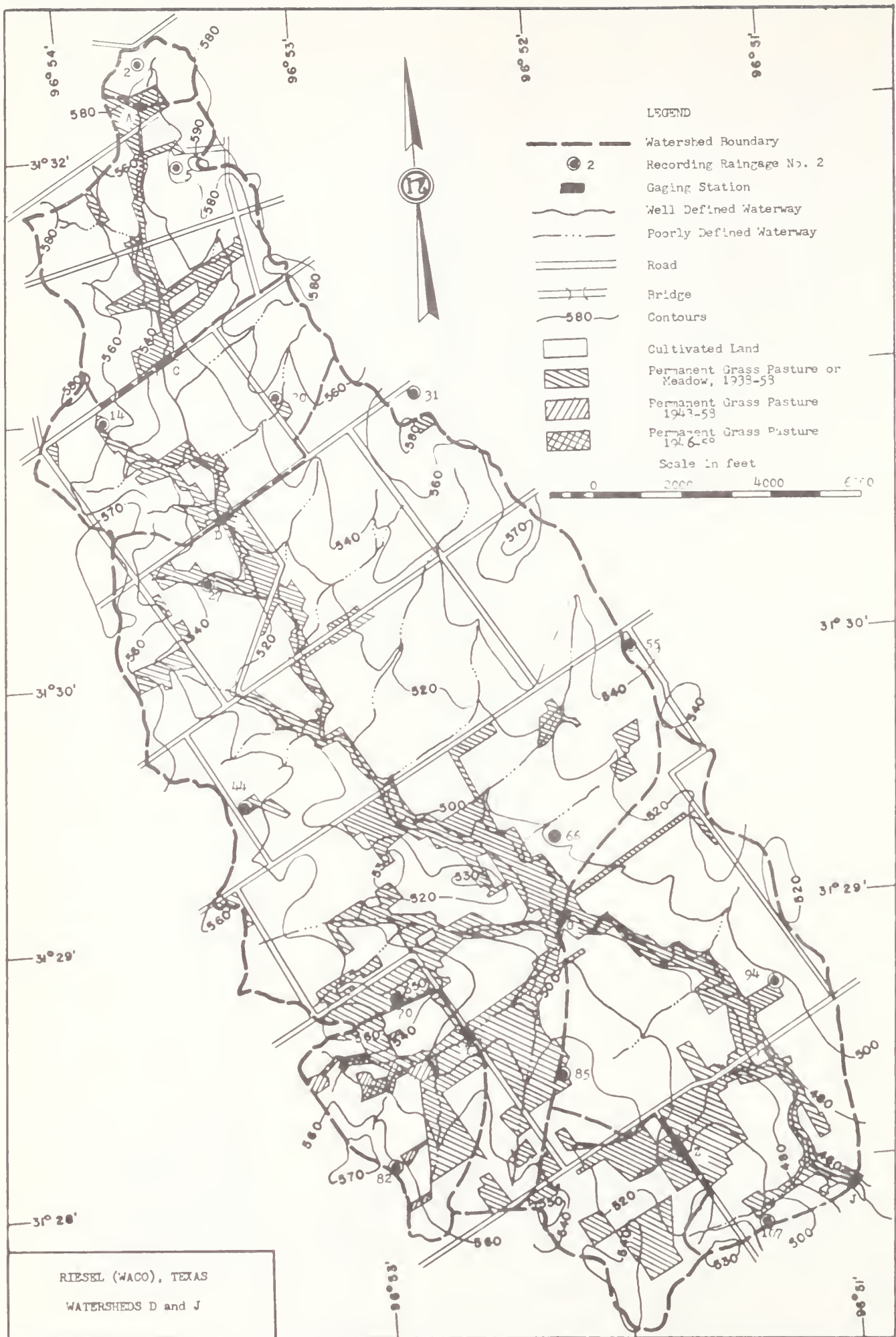
|                                                              |                   |                 |                                 |                   |               |                   |              |               |
|--------------------------------------------------------------|-------------------|-----------------|---------------------------------|-------------------|---------------|-------------------|--------------|---------------|
| Riesel (Waco), Texas                                         |                   |                 | Watershed J (42.5)              |                   |               | Area - 5860 acres |              |               |
| Antecedent conditions                                        |                   |                 | Rainfall                        |                   |               | Runoff            |              |               |
| Date                                                         | Rainfall (inches) | Runoff (inches) | Date and time                   | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
|                                                              |                   |                 | Event of June 15, 1942, Cont'd. |                   |               |                   |              |               |
|                                                              |                   |                 | 6:03                            | 0                 | 1.07          |                   |              |               |
|                                                              |                   |                 | :07                             | .60               | 1.11          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 14                | 1.09          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 27                | 1.14          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 31                | .95           |                   |              |               |
|                                                              |                   |                 | R. G.                           | 44                | 1.08          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 55                | 1.13          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 82                | 1.11          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 85                | 1.08          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 94                | 1.15          |                   |              |               |
|                                                              |                   |                 | R. G.                           | 107               | 1.02          |                   |              |               |
|                                                              |                   |                 | Weighted Average $\frac{1}{1}$  |                   | 1.09          |                   |              |               |
| Notes: To convert runoff in in/hr to cfs multiply by 5908.81 |                   |                 |                                 |                   |               |                   |              |               |
| $\frac{1}{1}$ Thiessen Method.                               |                   |                 |                                 |                   |               |                   |              |               |



RIESEL (WACO), TEXAS WATERSHED J







| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                                                                                           |                   |                 | Watershed W-1 (42.6)           |                   |               | Area - 176 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | Rainfall                       |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time                  | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| <u>Event of June 10, 1941</u>                                                                                                                                                                                                                                                                                                                                                                  |                   |                 |                                |                   |               |                  |              |               |
| 5-10-41                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | 0.0018          | 6-10-41                        | Raingage          | W-2A          | 6-10-41          |              |               |
| 5-11                                                                                                                                                                                                                                                                                                                                                                                           | .09               | .0029           | 11:25a                         | 0                 | 0             | 11:30a           | 0.0003       | 0             |
| 5-12,18                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | .0097           | :30                            | .72               | .06           | :41              | .0106        | .0005         |
| 5-19                                                                                                                                                                                                                                                                                                                                                                                           | 1.68              | .2430           | :32                            | 2.40              | .14           | :43              | .0366        | .0012         |
| 5-20                                                                                                                                                                                                                                                                                                                                                                                           | 1.09              | .6932           | :36                            | 1.80              | .26           | :47              | .171         | .0083         |
| 5-21                                                                                                                                                                                                                                                                                                                                                                                           | .08               | .0183           | :38                            | 3.00              | .36           | :49              | .294         | .0215         |
| 5-22                                                                                                                                                                                                                                                                                                                                                                                           | .48               | .2330           | :40                            | 3.90              | .49           | :51              | .501         | .0289         |
| 5-23,24                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | .0150           | :42                            | 4.80              | .65           | :54              | .948         | .0647         |
| 5-25                                                                                                                                                                                                                                                                                                                                                                                           | .29               | .0515           | :44                            | 5.10              | .82           | 12:00            | 1.68         | .1940         |
| 5-26,27                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | .0088           | :48                            | 6.90              | 1.28          | :02p             | 2.12         | .2570         |
| 5-28                                                                                                                                                                                                                                                                                                                                                                                           | .05               | .0033           | :50                            | 6.00              | 1.48          | :05              | 2.95         | .3825         |
| 5-29,31                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | .0077           | :52                            | 5.10              | 1.65          | :08              | 3.36         | .5419         |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                            | 0                 | .0017           | :54                            | 3.90              | 1.78          | :10              | 3.40         | .6545         |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                            | 1.27              | .3744           | :56                            | 3.60              | 1.90          | :12              | 3.36         | .7672         |
| 6-3                                                                                                                                                                                                                                                                                                                                                                                            | .10               | .0151           | :58                            | 3.00              | 2.00          | :14              | 3.29         | .8779         |
| 6-4,5                                                                                                                                                                                                                                                                                                                                                                                          | 0                 | .0055           | 12:00                          | 2.70              | 2.09          | :18              | 2.95         | 1.0866        |
| 6-6                                                                                                                                                                                                                                                                                                                                                                                            | .94               | .2144           | :04p                           | 1.65              | 2.20          | :23              | 2.22         | 1.3017        |
| 6-7                                                                                                                                                                                                                                                                                                                                                                                            | .07               | .0408           | :06                            | .60               | 2.22          | :28              | 1.69         | 1.4655        |
| 6-8                                                                                                                                                                                                                                                                                                                                                                                            | 0                 | .0040           | :08                            | 1.80              | 2.28          | :34              | 1.27         | 1.6130        |
| 6-9                                                                                                                                                                                                                                                                                                                                                                                            | .38               | .0400           | :10                            | 1.20              | 2.32          | :42              | .768         | 1.7497        |
| <u>Watershed Conditions:</u> Straight row cultivation. No terraces or contour rows. 46% of the area in cotton at early fruiting stage, 20% of area in corn at silking stage, 14% in oats stubble, 7% in pasture moderately to heavily grazed, 6% in grain sorghum (rows) booting stage, 3% in native grass meadow with approximately 12 inches of dense growth and 4% in roads and farmsteads. |                   |                 | :12                            | .30               | 2.33          | :46              | .570         | 1.7938        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :18                            | .10               | 2.34          | :50              | .445         | 1.8275        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :21                            | .40               | 2.36          | :52              | .398         | 1.8415        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :30                            | .13               | 2.38          | 1:00             | .283         | 1.8868        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :32                            | .60               | 2.40          | :05              | .234         | 1.9084        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :34                            | .30               | 2.41          | :15              | .138         | 1.9388        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | :40                            | .10               | 2.42          | :20              | .115         | 1.9494        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | 1:30e                          | .01               | 2.43          | :30              | .0779        | 1.9653        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 |                                |                   |               | :50              | .0433        | 1.9849        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 |                                |                   |               | 3:00             | .0100        | 2.0100        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | R. G.                          | 75A               | 2.23          | :30              | .0068        | 2.0147        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | R. G.                          | 89                | 2.32          | 6:00 <u>1/</u>   | .0022        | 2.0240        |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | R. G.                          | W-4               | 2.50          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | Weighted                       | Average <u>2/</u> | 2.39          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | <u>Event of March 26, 1946</u> |                   |               |                  |              |               |
| 2-23,28-46                                                                                                                                                                                                                                                                                                                                                                                     | 0                 | .0233           | 3-26-46                        | Raingage          | W-2A          | 3-26-46          |              |               |
| 3-1,4                                                                                                                                                                                                                                                                                                                                                                                          | 0                 | .0114           | 5:58p                          | 0                 | 0             | 5:55p            | .0004        | 0             |
| 3-5                                                                                                                                                                                                                                                                                                                                                                                            | .06               | .0039           | 6:30                           | .09               | .05           | 6:15             | .0005        | .0002         |
| 3-6,11                                                                                                                                                                                                                                                                                                                                                                                         | 0                 | .0131           | :34                            | 1.50              | .10           | :37              | .0157        | .0009         |
| 3-12                                                                                                                                                                                                                                                                                                                                                                                           | .40               | .0049           | :37                            | 5.80              | .39           | :39              | .0479        | .0019         |
| 3-13                                                                                                                                                                                                                                                                                                                                                                                           | 1.60              | .5759           | :41                            | 3.00              | .59           | :42              | .0852        | .0053         |
| 3-14,24                                                                                                                                                                                                                                                                                                                                                                                        | 0                 | .0466           | :44                            | 2.20              | .70           | :44              | .166         | .0097         |
| 3-25                                                                                                                                                                                                                                                                                                                                                                                           | 1.02              | .1010           | :51                            | .43               | .75           | :46              | .527         | .0213         |
| <u>Watershed Conditions:</u> Straight row cultivation. No terraces or contour rows. 38% of area rebudded for cotton and harrowed 2nd week of March (no crop growing). 26% of area planted to corn 1st week of March, 8% in Fall seeded oats, (continued)                                                                                                                                       |                   |                 | 8:25                           | .07               | .79           | :48              | .807         | .0435         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | 9:00e                          | .03               | .81           | :49              | .875         | .0575         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | R. G.                          | 75A               | .96           | :50              | .898         | .0722         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | R. G.                          | W-4               | .86           | :52              | .926         | .1026         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 | Weighted                       | Average <u>2/</u> | .84           | :56              | .892         | .1630         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 |                                |                   |               | :58              | .779         | .1911         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 |                                |                   |               | 7:00             | .638         | .2146         |
|                                                                                                                                                                                                                                                                                                                                                                                                |                   |                 |                                |                   |               |                  |              |               |
| Notes: To convert runoff in in/hr to cfs multiply by <sup>1</sup> 177.47<br><sup>1/</sup> Slowly decreasing seepage flow.<br><sup>2/</sup> Thiessen method.                                                                                                                                                                                                                                    |                   |                 |                                |                   |               |                  |              |               |

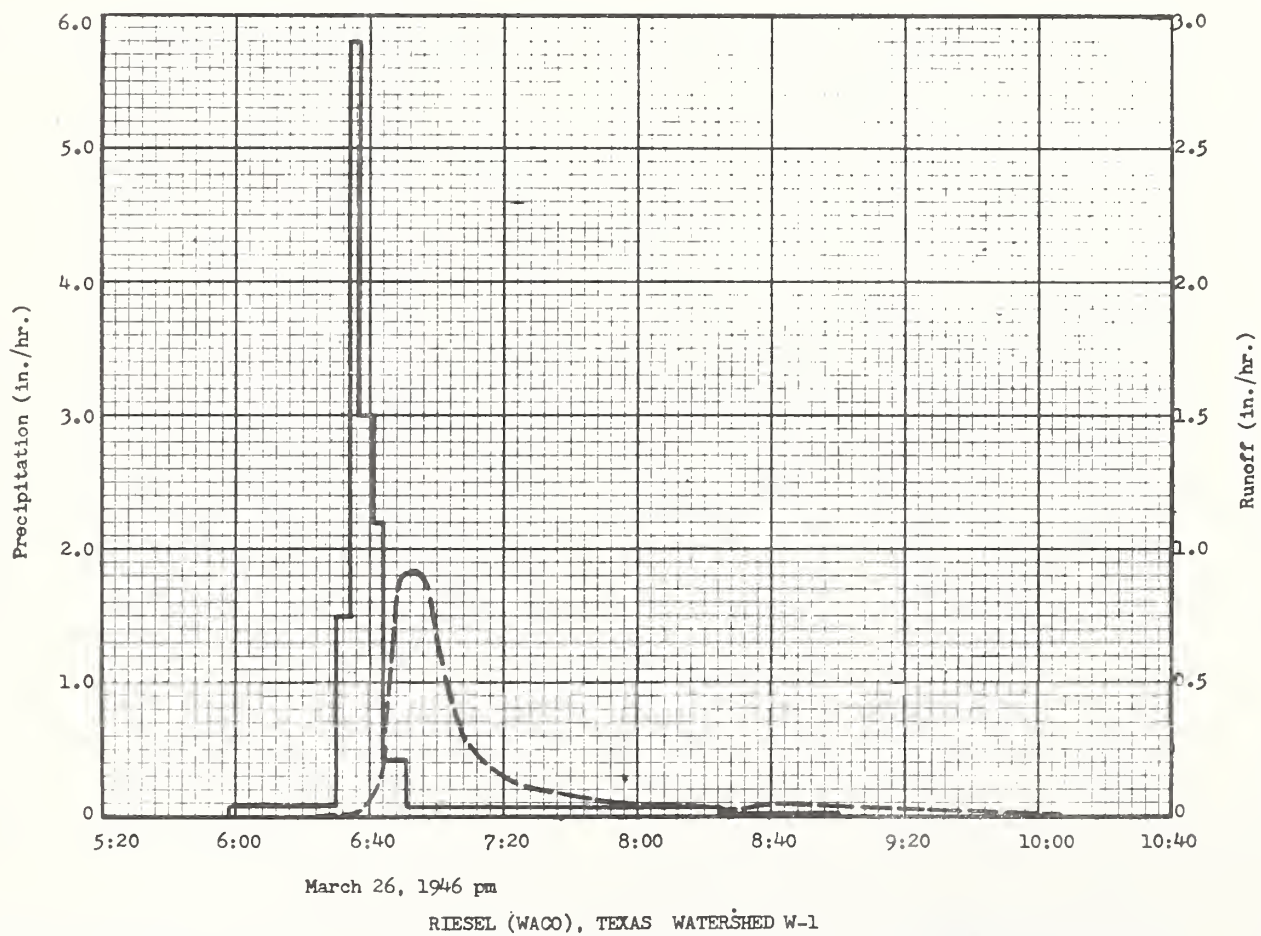
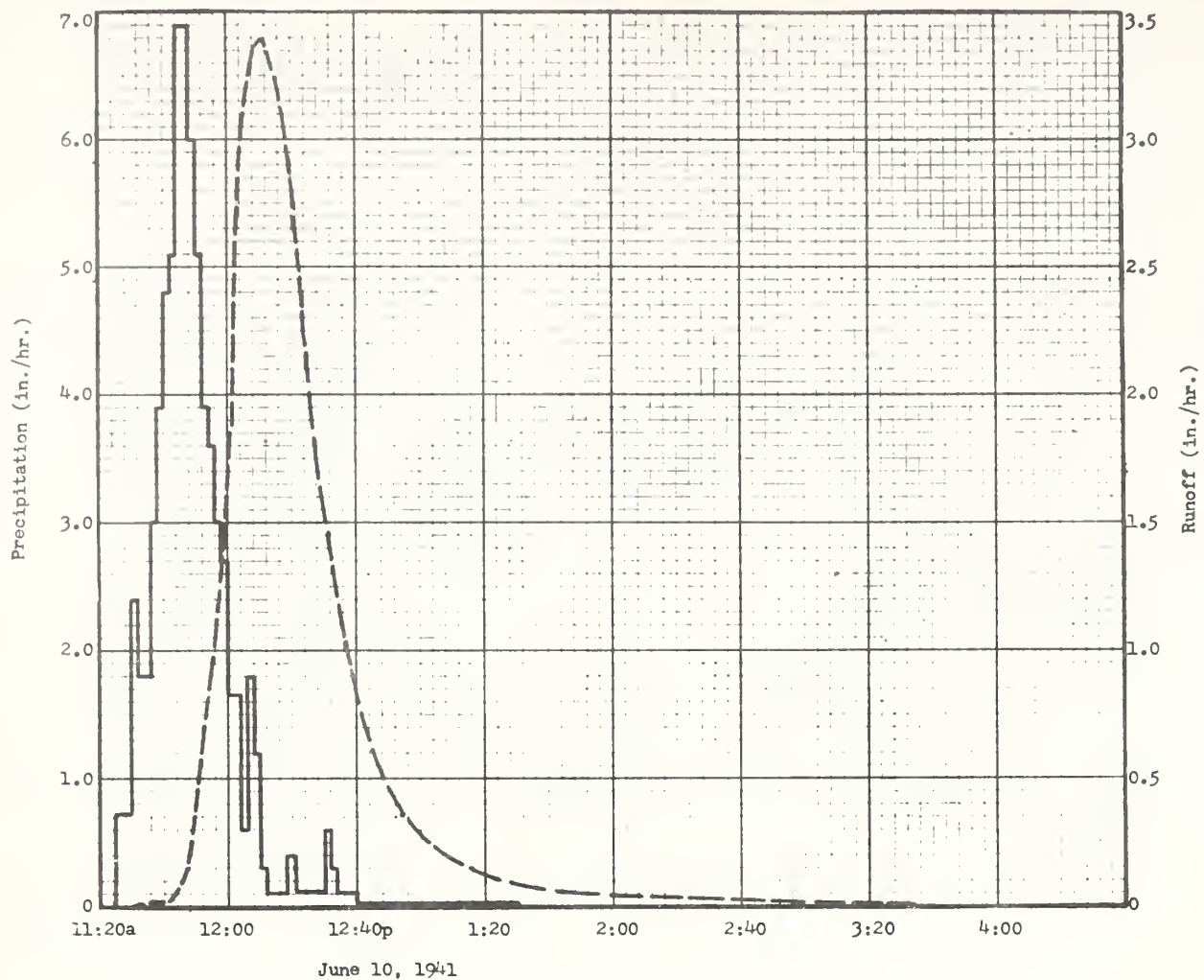
| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                                                                                                 |                      |                    | Watershed W-1              |                      |                  | (42.6)           |                 |                  | Area - 176 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                |                      |                    | Rainfall                   |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time           | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of March 26, 1946, Cont'd.                                                                                                                                                                                                                                                                                                                                                                     |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |
| 3% in Fall seeded oats-clover,<br>13% in pasture, 3% in native<br>grass meadow with short dense<br>vegetation, 4% flat broke for<br>sudan (no crop growing), 2%<br>bedded and harrowed for sorghum<br>2nd week of March (no crop<br>growing), 3% in farmsteads and<br>roads.                                                                                                                         |                      |                    |                            |                      |                  | 3-26-46          |                 |                  |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 7:03p            | 0.501           | 0.2428           |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :06              | .358            | .2645            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :10              | .254            | .2846            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :13              | .202            | .2959            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :17              | .154            | .3077            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :24              | .120            | .3234            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :46              | .0672           | .3557            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 8:18             | .0329           | .3811            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :27              | .0329           | .3860            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :46              | .0494           | .3990            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 10:05            | .0151           | .4394            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :28              | .0116           | .4445            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 11:59 <u>1/</u>  | .0051           | .4563            |                  |  |  |
| Event of April 27, 1949                                                                                                                                                                                                                                                                                                                                                                              |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |
| 3-27, 30-49                                                                                                                                                                                                                                                                                                                                                                                          | 0                    | T                  | 4-27-49                    | Raingage             | W-2A             | 4-27-49          |                 |                  |                  |  |  |
| 4-1                                                                                                                                                                                                                                                                                                                                                                                                  | .22                  | .0001              | 6:40p                      | 0                    | 0                | 6:41p            | T               | 0                |                  |  |  |
| 4-2                                                                                                                                                                                                                                                                                                                                                                                                  | .04                  | .0002              | :42                        | 2.40                 | .03              | :58              | .0076           | .0004            |                  |  |  |
| 4-3                                                                                                                                                                                                                                                                                                                                                                                                  | 0                    | T                  | :51                        | 3.47                 | .60              | 7:00             | .0266           | .0009            |                  |  |  |
| 4-4                                                                                                                                                                                                                                                                                                                                                                                                  | .12                  | .0002              | 7:01                       | 2.52                 | 1.02             | :03              | .0610           | .0030            |                  |  |  |
| 4-5                                                                                                                                                                                                                                                                                                                                                                                                  | 0                    | .0001              | :12                        | 1.04                 | 1.21             | :04              | .116            | .0044            |                  |  |  |
| 4-6,7                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | T                  | :25                        | .18                  | 1.25             | :06              | .215            | .0100            |                  |  |  |
| 4-9                                                                                                                                                                                                                                                                                                                                                                                                  | .47                  | .0004              | :54e                       | .03                  | 1.29             | :07              | .244            | .0138            |                  |  |  |
| 4-10                                                                                                                                                                                                                                                                                                                                                                                                 | .02                  | .0003              |                            |                      |                  | :11              | .422            | .0349            |                  |  |  |
| 4-11,13                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .0003              |                            |                      |                  | :17              | .621            | .0891            |                  |  |  |
| 4-14                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | T                  | R G.                       | 75A                  | 1.20             | :18              | .627            | .0995            |                  |  |  |
| 4-19                                                                                                                                                                                                                                                                                                                                                                                                 | .73                  | .0006              | R G.                       | 89                   | 1.25             | :19              | .615            | .1098            |                  |  |  |
| 4-20                                                                                                                                                                                                                                                                                                                                                                                                 | .44                  | .0036              | R G.                       | W-4                  | .94              | :21              | .570            | .1295            |                  |  |  |
| 4-21                                                                                                                                                                                                                                                                                                                                                                                                 | .01                  | .0004              | Weighted Average <u>3/</u> |                      |                  | :25              | .458            | .1645            |                  |  |  |
| 4-22,23                                                                                                                                                                                                                                                                                                                                                                                              | 0                    | .0007              |                            |                      |                  | :29              | .294            | .1893            |                  |  |  |
| 4-24                                                                                                                                                                                                                                                                                                                                                                                                 | .26                  | .0007              |                            |                      |                  | :34              | .254            | .2120            |                  |  |  |
| 4-25                                                                                                                                                                                                                                                                                                                                                                                                 | .57                  | .0085              |                            |                      |                  | :38              | .220            | .2278            |                  |  |  |
| 4-26                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0016              |                            |                      |                  | :47              | .142            | .2541            |                  |  |  |
| Watershed Conditions: 30% of<br>area in cotton planted 4-18,19;<br>19% of area in corn, cultivated<br>4-12, corn approx. 8" high; 19%<br>in Fall sown oats in booting<br>stage; 14% in pasture; 5% in<br>sudan planted in rows 3-29, sudan<br>approx. 12" high; 4% in sorghum<br>(rows) planted 4-16; 3% in Fall<br>seeded oats-clover; 3% in native<br>grass meadow; 3% in farmsteads<br>and roads. |                      |                    |                            |                      |                  | 8:01             | .0881           | .2809            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :11              | .0649           | .2936            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :34              | .0341           | .3119            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | :56              | .0238           | .3225            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 9:23             | .0157           | .3313            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 10:30            | .0072           | .3432            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 11:59p           | .0035           | .3507            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 4-23-49          |                 |                  |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  | 6:36a <u>2/</u>  | .0011           | .3627            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |
| Event of April 24, 1957                                                                                                                                                                                                                                                                                                                                                                              |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |
| 3-27-57                                                                                                                                                                                                                                                                                                                                                                                              | .89                  | .0304              | 4-24-57                    | Raingage             | W-2A             | 4-24-57          |                 |                  |                  |  |  |
| 3-28                                                                                                                                                                                                                                                                                                                                                                                                 | 0                    | .0065              | 12:54p                     | 0                    | 0                | 1:05p            | .0003           | 0                |                  |  |  |
| 3-31                                                                                                                                                                                                                                                                                                                                                                                                 | 1.34                 | .3021              | 1:40                       | .03                  | .02              | 2:51             | .0056           | .0009            |                  |  |  |
| 4-1,2                                                                                                                                                                                                                                                                                                                                                                                                | 0                    | .0113              | 2:32                       | 0                    | .02              | :55              | .0144           | .0011            |                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                      |                      |                    | :40                        | .22                  | .05              | :56              | .130            | .0070            |                  |  |  |
| Notes: To convert runoff in in/hr to cfs multiply by 177.47.                                                                                                                                                                                                                                                                                                                                         |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |
| <u>1/</u> Slowly decreasing seepage flow. <u>2/</u> Runoff continued at slowly decreasing rate until 4-22-49. .0050 in runoff after 6:36, 4-23-49. <u>3/</u> Thiessen method.                                                                                                                                                                                                                        |                      |                    |                            |                      |                  |                  |                 |                  |                  |  |  |

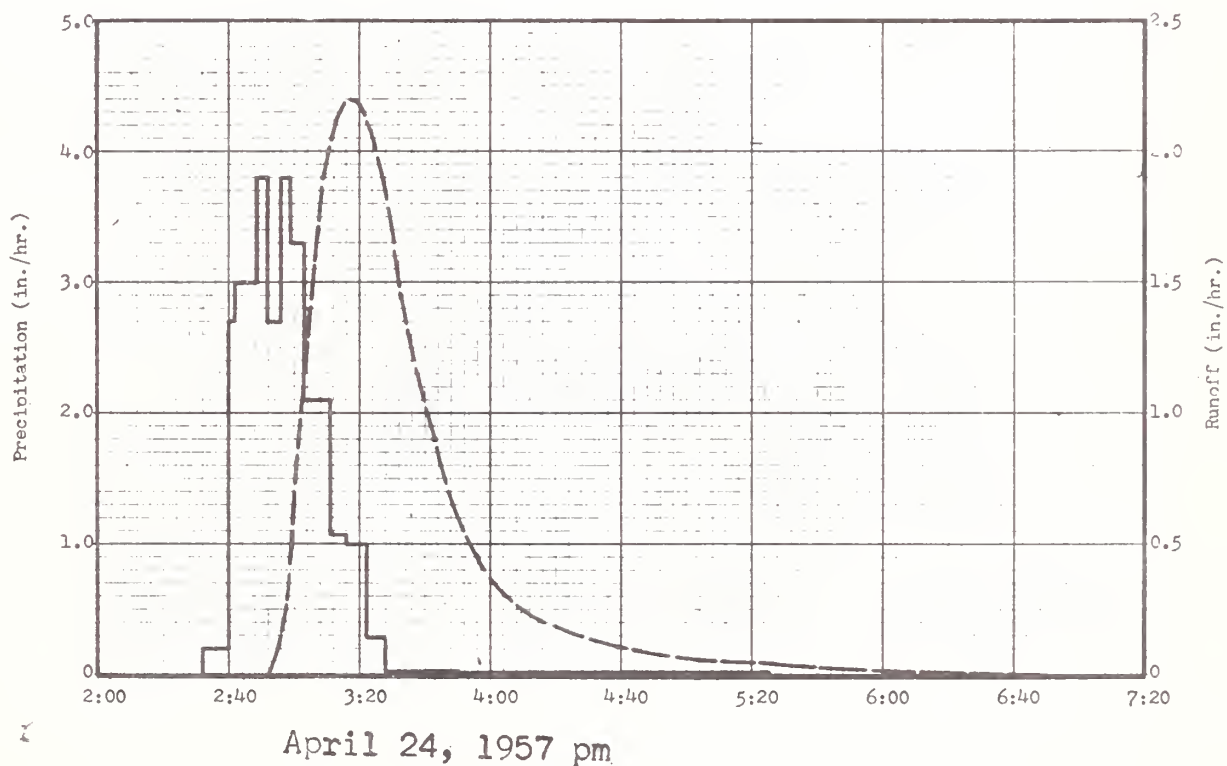
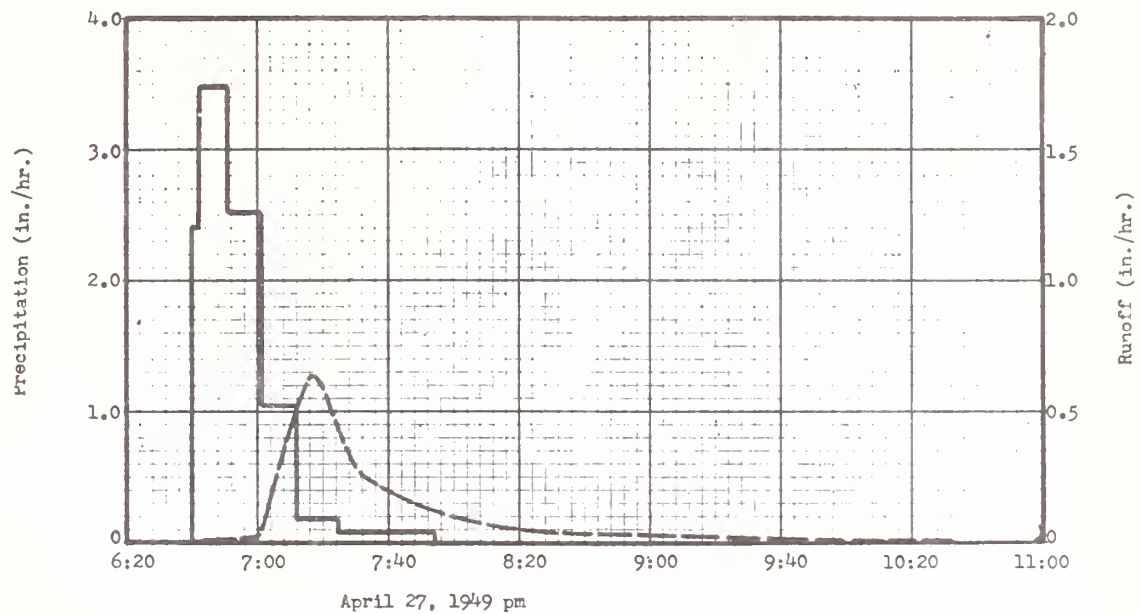


| Riesel (Waco), Texas                                                                                                                                                                                                                                                                                                                                         |                   |                 | Watershed W-1 (42.6) |                   |               | Area - 176 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                        |                   |                 | Rainfall             |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                         | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Event of April 24, 1957, Cont'd.                                                                                                                                                                                                                                                                                                                             |                   |                 |                      |                   |               |                  |              |               |
| 4-3-57                                                                                                                                                                                                                                                                                                                                                       | 0.25              | 0.0011          | 4-24-57              | Raingage          | W-2A          | 4-24-57          |              |               |
| 4-4                                                                                                                                                                                                                                                                                                                                                          | .03               | 0               | 1:42p                | 2.70              | .14           | 2:58p            | 0.342        | 0.0145        |
| 4-8                                                                                                                                                                                                                                                                                                                                                          | .04               | 0               | :49                  | 3.00              | .49           | 3:01             | .830         | .0415         |
| 4-13                                                                                                                                                                                                                                                                                                                                                         | .04               | 0               | :52                  | 3.80              | .68           | :04              | 1.30         | .0943         |
| 4-15                                                                                                                                                                                                                                                                                                                                                         | .02               | 0               | :56                  | 2.70              | .82           | :07              | 1.68         | .1691         |
| 4-19                                                                                                                                                                                                                                                                                                                                                         | 4.82              | 2.7346          | :59                  | 3.80              | 1.01          | :10              | 1.94         | .2595         |
| 4-20                                                                                                                                                                                                                                                                                                                                                         | .23               | .2107           | 3:03                 | 3.30              | 1.23          | :12              | 2.08         | .3262         |
| 4-21                                                                                                                                                                                                                                                                                                                                                         | .21               | .0086           | :11                  | 2.10              | 1.51          | :15              | 2.18         | .4322         |
| 4-22                                                                                                                                                                                                                                                                                                                                                         | .30               | .0588           | :16                  | 1.08              | 1.62          | :17              | 2.20         | .5052         |
| 4-23                                                                                                                                                                                                                                                                                                                                                         | 3.99              | 3.5059          | :22                  | 1.00              | 1.72          | :19              | 2.17         | .5778         |
| <u>Watershed Conditions:</u> 28% of area bedded for cotton (bare) Nov. 56; 20% in corn, cultivated 4-16,17,18, corn approx. 6" high; 19% in Fall seeded oats in milk stage 2' high; 14% in pasture; 9% in grain sorghum (rows) planted 4-10,11, 2" high; 2% in broadcast grain sorghum 4-14, 2" high; 3% in native grass meadow; 5% in farmsteads and roads. |                   |                 | :28                  | .30               | 1.75          | :21              | 2.13         | .6494         |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :50                  | .05               | 1.77          | :24              | 2.02         | .7529         |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 5:26e                | .04               | 1.83          | :27              | 1.85         | .8491         |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :30              | 1.65         | .9365         |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :36              | 1.25         | 1.0813        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | R. G.                | 75A               | 1.86          | :40              | 1.00         | 1.1562        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | R. G.                | 89                | 1.87          | :45              | .824         | 1.2318        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | R. G.                | W-4               | 2.14          | :55              | .540         | 1.3437        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 | Weighted             | Average <u>2/</u> | 1.85          | 4:01             | .353         | 1.3888        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :05              | .299         | 1.4103        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :10              | .268         | 1.4339        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :22              | .184         | 1.4790        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :39              | .115         | 1.5202        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | :55              | .0756        | 1.5460        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | 5:15             | .0509        | 1.5670        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | 6:50             | .0144        | 1.6106        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | 8:00             | .0072        | 1.6227        |
|                                                                                                                                                                                                                                                                                                                                                              |                   |                 |                      |                   |               | 11:59 <u>1/</u>  | .0018        | 1.6371        |

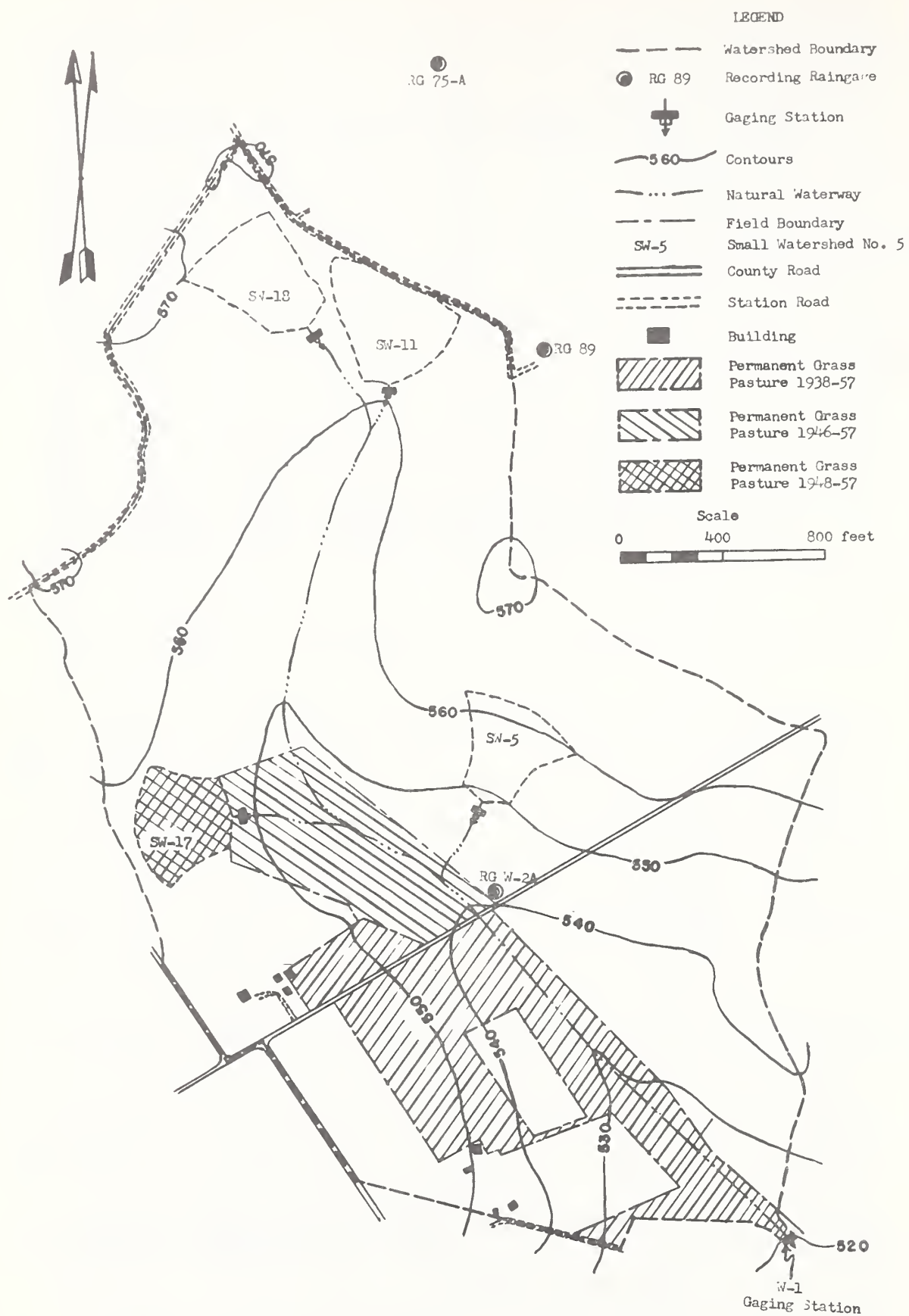
Notes: To convert runoff in in/hr to cfs multiply by 177.47.  
1/ Slowly decreasing seepage flow.  
2/ Thiessen method.







RIESEL (WACO), TEXAS WATERSHED W-1



RIESEL (WACO), TEXAS  
WATERSHED W-1

Sheet 1 of 1

| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                 | Watershed W-3 (44.1) |                   |               | Area - 481 acres    |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|---------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | Rainfall             |                   |               | Runoff              |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time       | Rate (in/hr) | Acc. (inches) |
| Event of June 20, 1939                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                 |                      |                   |               |                     |              |               |
| 5-20-39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.87              | 0.017           | 6-20-39              | Raingage          | B-28-R        | 6-20-39             |              |               |
| 5-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .38               | .002            | 1:04p                | 0                 | 0             | 1:19p               | 0            | 0             |
| 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .45               | 0               | :06                  | 1.80              | .06           | :30                 | .072         | .0026         |
| 5-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .02               | 0               | :10                  | 1.20              | .14           | :33                 | .127         | .0077         |
| 6-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .37               | 0               | :13                  | 2.00              | .24           | :37                 | .169         | .0176         |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .03               | 0               | :16                  | 4.00              | .44           | :42                 | .233         | .0335         |
| 6-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .27               | 0               | :20                  | 1.05              | .51           | :47                 | 1.05         | .0874         |
| 6-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .37               | 0               | :26                  | 1.20              | .63           | :50                 | 1.15         | .1429         |
| 6-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .33               | .010            | :35                  | 1.00              | .78           | :55                 | 1.07         | .2365         |
| 6-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | .60               | .209            | :50                  | .48               | .90           | 2:00                | .877         | .3176         |
| <u>Watershed Conditions:</u> 22.8% of area in corn, 4.6% in sorghum rows, 33.9% in wheat, 13.3% in oats, 2.1% in barley, 1.0% in rye, 1.7% in sorghum, 1.7% in meadow, 15.4% in pasture, 0.4% fallow, 2.5% in farmsteads and 0.6% in roads. The corn was 12 inches high, much of it cultivated within the week preceeding. Oats wheat, and barley, 10 to 14 inches high, partly harvested. Meadows well covered. Pastures very poor, grass 1 inch high. Sorghums sprouted. All cultivation in straight rows. |                   |                 | 4:20                 | .06               | .93           | 2:10                | .574         | .4374         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :35                  | .52               | 1.06          | :20                 | .421         | .5188         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :40                  | 1.32              | 1.17          | :35                 | .287         | .6055         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :50                  | .24               | 1.21          | 3:00                | .148         | .6944         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 5:00e                | .12               | 1.23          | 4:00                | .044         | .7772         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 6-20-39              | Raingage          | A-31-R        | 4:20                | .030         | .7894         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 1:03p                | 0                 | 0             | 6:00                | .040         | .8609         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :06                  | 3.40              | .17           | 9:00                | .002         | .8992         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :10                  | 4.05              | .44           | 12:00               | T            | .9015         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :15                  | 6.36              | .97           | 6-21-39             |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :20                  | 5.76              | 1.45          | 5:00a               | T            | .9025         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :30                  | 2.10              | 1.80          | 5:00p               | T            | .9041         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 2:04                 | .37               | 2.01          | 7:00p <sup>1/</sup> | T            | .9041         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 4:20                 | 0                 | 2.01          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :30                  | .48               | 2.09          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :40                  | .60               | 2.19          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :50                  | .48               | 2.27          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 5:10e                | .06               | 2.29          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 6-20-39              | Raingage          | B-36-R        |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 1:04p                | 0                 | 0             |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :10                  | 1.20              | .12           |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :15                  | 3.48              | .41           |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :30                  | 2.00              | .91           |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :40                  | .96               | 1.07          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 2:00                 | .24               | 1.15          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 4:16                 | 0                 | 1.15          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :23                  | .43               | 1.20          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | :30                  | 1.03              | 1.32          |                     |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                 | 5:00e                | .34               | 1.49          |                     |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 484.97.<br>Weighted precipitation for storm of 6-20-39 1.86 inches by Thiessen method.<br><u>1/</u> New storm started at approximately 7:00 pm on 6-21-39.                                                                                                                                                                                                                                                                                             |                   |                 |                      |                   |               |                     |              |               |



| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | Watershed W-3 (44.1) |                   |               | Area - 481 acres |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | Rainfall             |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Event of July 10, 1951                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                 |                      |                   |               |                  |              |               |
| 6-13-51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.78              | 0               | 7-10-51              | Raingage          | B-28-R        | 7-10-51          |              |               |
| 6-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .10               | .26             | 4:55a                | 0                 | 0             | 6:04a            | 0            | 0             |
| 6-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .48               | 0               | 5:00                 | 2.16              | .18           | :10              | .172         | .0076         |
| 6-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .88               | .29             | :50                  | .14               | .30           | :20              | .392         | .0545         |
| 6-25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.75              | 1.19            | :56                  | 1.40              | .44           | :30              | 1.54         | .2351         |
| 6-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .20               | .01             | 6:00                 | 3.00              | .64           | :40              | 1.71         | .5001         |
| Watershed Conditions: 27.4% in corn, 19.1% in wheat, 18.7% in oats, 2.1% in meadow, 15.8% in pasture, 5.8% in sorghum rows, .4% sorghum drilled, 1.7% sudan grass, 1.3% brome-grass, .8% sweet clover, 3.8% in fallow, 2.5% in farmsteads, and .6% in roads. The corn was 20-30" high and in good condition; the oats were 16-18" high, poor condition, and headed out; wheat was 18-20" high in fair to good condition; the meadow was 12-16" high in good condition; and the pasture was 4-5" high in good condition. All cultivation was in straight rows. |                   |                 | :10                  | 5.16              | 1.50          | :45              | 1.74         | .6434         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :12                  | 5.70              | 1.69          | :50              | 1.70         | .7867         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :30                  | 1.80              | 2.23          | 7:10             | .940         | 1.2401        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7:02                 | 1.14              | 2.84          | :30              | .478         | 1.4602        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 8:02e                | .05               | 2.89          | 8:00             | .156         | 1.6057        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7-10-51              | Raingage          | A-31-R        | 10:00            | .006         | 1.6620        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 4:59a                | 0                 | 0             | 5:45p 1/         | .001         | 1.6801        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 5:01                 | .90               | .03           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :06                  | 1.92              | .19           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :10                  | .15               | .20           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :42                  | 0                 | .20           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :54                  | .50               | .30           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 6:10                 | 2.66              | 1.01          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :32                  | 1.53              | 1.57          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :38                  | 2.10              | 1.78          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :48                  | 1.02              | 1.95          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :58                  | .42               | 2.02          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7:48                 | .05               | 2.06          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 10:48e               | .01               | 2.08          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7-10-51              | Raingage          | B-23-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 4:55a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 5:03                 | 1.95              | .26           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :06                  | .40               | .28           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :44                  | 0                 | .28           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :48                  | .30               | .30           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :56                  | 1.50              | .50           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 6:02                 | 3.30              | .83           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :08                  | 5.50              | 1.38          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :14                  | 4.80              | 1.86          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :20                  | 2.30              | 2.09          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :30                  | 1.38              | 2.32          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :38                  | 2.48              | 2.65          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :46                  | 1.12              | 2.80          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | :58                  | .40               | 2.88          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 8:18                 | .08               | 2.94          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 10:18e               | .01               | 2.96          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7-10-51              | Raingage          | Met           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 4:56a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7:50e                |                   | 2.42          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 7-10-51              | Raingage          | B-25-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 4:53a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | 10:07e               |                   | 3.04          |                  |              |               |

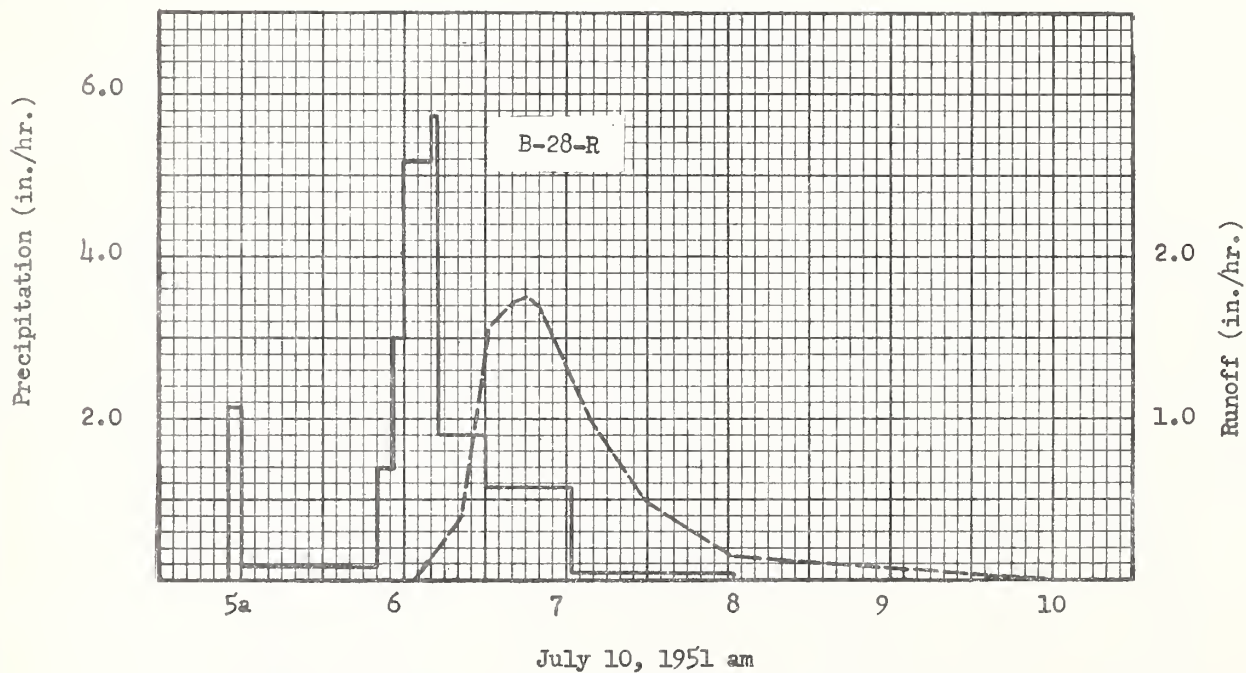
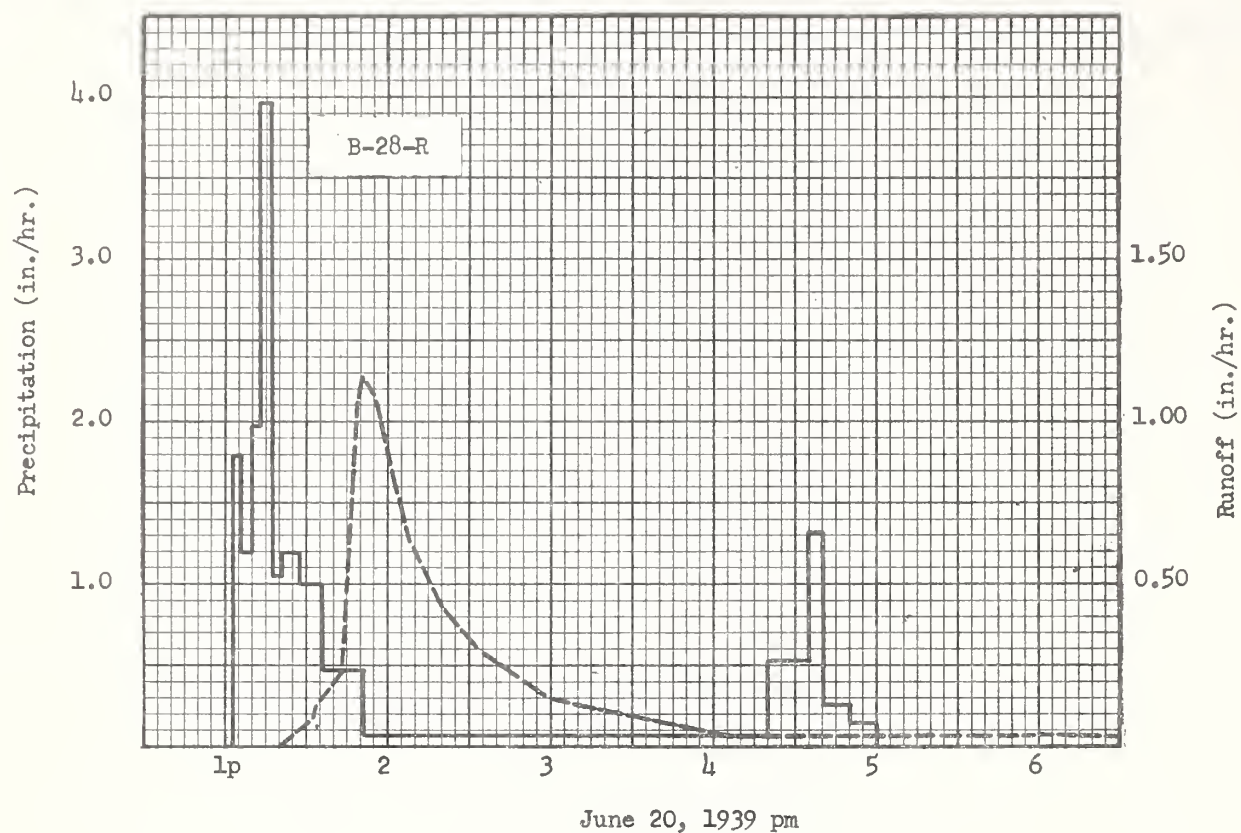
Notes: Weighted precipitation for storm of 7-10-51 2.70 inches by Thiesen method.  
 1/ New storm started at 5:46p on 7-10-51.

| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 | Watershed W-3 (44.1) |                   |               | Area - 481 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                 | Rainfall             |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Event of July 10, 1951 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                 |                      |                   |               |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 7-10-51              | Raingage          | B-32-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 5:00a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 9:10e                |                   | 2.83          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 7-10-51              | Raingage          | B-33-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 4:57a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 12:39p e             | T                 | 2.15          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 7-10-51              | Raingage          | B-36-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 4:52a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 8:59e                |                   | 2.60          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 7-10-51              | Raingage          | B-38-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 5:00a                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 9:14e                |                   | 2.66          |                  |              |               |
| Event of June 7, 1953                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                 |                      |                   |               |                  |              |               |
| 5-10-53                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.15              | 0               | 6-7-53               | Raingage          | B-28-R        | 6-7-53           |              |               |
| 5-16&17                                                                                                                                                                                                                                                                                                                                                                                                                                                    | .50               | 0               | 4:50p                | 0                 | 0             | 5:06p            | 0            | 0             |
| 5-27                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.27              | .491            | :54                  | 1.20              | .08           | :12              | .113         | .0021         |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .18               | 0               | 5:01                 | 2.31              | .35           | :18              | .287         | .0222         |
| 6-5&6                                                                                                                                                                                                                                                                                                                                                                                                                                                      | .50               | 0               | :07                  | 3.20              | .67           | :30              | .542         | .0992         |
| Watershed Conditions: 46.1% of area in corn, 13.7% in oats, 15.8% in pasture, 2.1% in meadow, 3.1% in brome grass, 1.7% in sudan grass, .4% in millet, 7.5% in fallow, 1.7% in alfalfa, 4.8% in sorghum row, 2.5% in farmsteads, and .6% in roads. The corn was about 7" high, the wheat about 20" high, oats 12", milo 3", meadow 6", pasture 3" and brome grass about 20" high. The corn was planted about May 15. All cultivation was in straight rows. |                   |                 | :20                  | 1.39              | .97           | :46              | .718         | .2757         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :34                  | 1.24              | 1.26          | 6:16             | .478         | .5786         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 6:00                 | .49               | 1.47          | :56              | .202         | .7966         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :36e                 | .20               | 1.59          | 7:16             | .081         | .8444         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 |                      |                   |               | :56              | .013         | .8682         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 6-7-53               | Raingage          | A-31-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 4:51p                | 0                 | 0             | 8:56             | .003         | .8748         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :54                  | 2.20              | .11           | 6-8-53           |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :56                  | 1.50              | .16           | 2:16a            | T            | .8787         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :59                  | 3.40              | .33           | 7:16e            | 0            | .8787         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 5:01                 | 1.50              | .38           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :06                  | 2.52              | .59           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :08                  | 4.20              | .73           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :12                  | 1.35              | .82           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :20                  | 1.35              | 1.00          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :22                  | .60               | 1.02          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :24                  | 1.50              | 1.07          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :36                  | 1.10              | 1.29          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :40                  | 1.20              | 1.37          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :46                  | .50               | 1.42          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 6:00                 | .21               | 1.47          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :14                  | .30               | 1.54          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :22e                 | .30               | 1.58          |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 6-7-53               | Raingage          | B-23-R        |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | 4:50p                | 0                 | 0             |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :52                  | 2.10              | .07           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :54                  | .90               | .10           |                  |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 | :57                  | 3.20              | .26           |                  |              |               |
| Notes: Weighted precipitation for storm of 6-7-53 <u>1.56</u> inches by Thiesen method.                                                                                                                                                                                                                                                                                                                                                                    |                   |                 |                      |                   |               |                  |              |               |

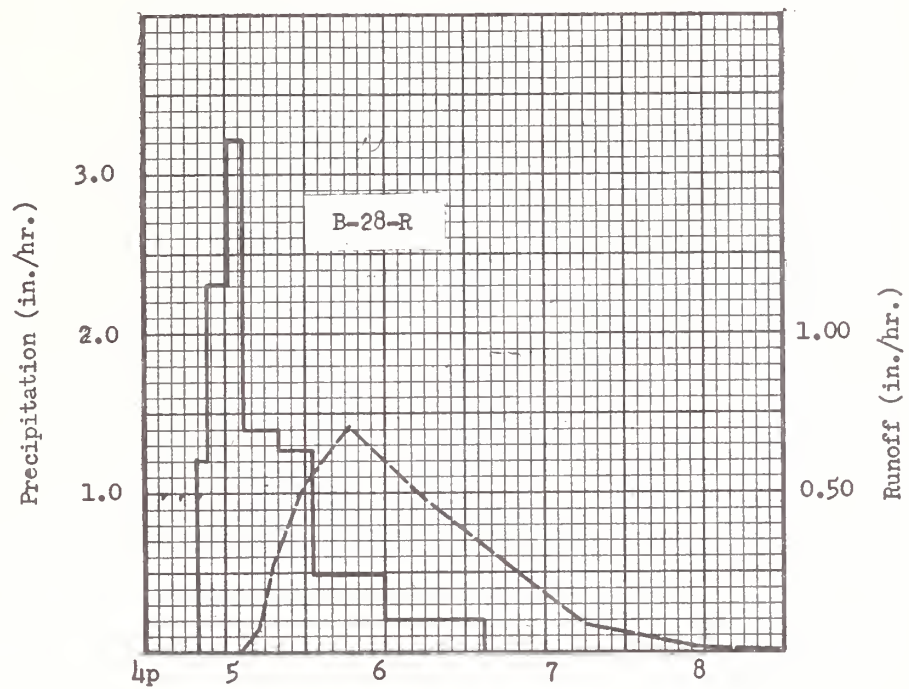
| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                 | Watershed W-3 (44.1) |                   |               | Area - 481 acres   |              |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                 | Rainfall             |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| Event of June 7, 1953 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                 |                      |                   |               |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 5:01                 | 2.40              | .42           |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :15                  | 1.93              | .87           |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :24                  | .93               | 1.01          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :33                  | 1.40              | 1.22          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :45                  | .70               | 1.36          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:15                 | .28               | 1.50          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :33e                 | .07               | 1.52          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | Met           |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:55p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:38e                |                   | 1.54          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | B-25-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:50p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:22e                |                   | 1.61          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | B-32-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:53p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 7:01e                |                   | 1.54          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | B-33-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:54p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:42e                |                   | 1.55          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | B-36-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:52p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:40e                |                   | 1.59          |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-7-53               | Raingage          | B-38-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 4:54p                | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6:54e                |                   | 1.85          |                    |              |               |
| Event of June 15, 1957                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                 |                      |                   |               |                    |              |               |
| 5-29-57                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.84              | 0.042           | 6-15-57              | Raingage          | B-32-R        | 6-15-57            |              |               |
| 5-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .33               | .009            | 10:51a               | 0                 | 0             | 11:16a             | 0            | 0             |
| 6-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .78               | .037            | 11:05                | 1.63              | .38           | :45                | .189         | .0267         |
| 6-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .86               | .087            | :17                  | 1.45              | .67           | 12:00              | .295         | .0839         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :27                  | 1.62              | .94           | :10p               | .786         | .1671         |
| <u>Watershed Conditions:</u> 1.9% of area in sweet clover, 6.4% in oats, 16.4% in wheat, 18.7% in pasture, 2.1% in meadow, 2.3% in sudan, 9.2% in fallow, 1.6% alfalfa, 38.1% in sorghum, .2% in trees, .6% in roads and 2.5% in farmsteads. The wheat was fully headed, about 4 ft. high, and in excellent condition; the sorghum was not out of the ground; the pasture was in excellent condition with a height of 12 inches; and the meadow was in excellent condition, heading out, and about 14 inches high. All cultivation was in straight rows. |                   |                 | :33                  | .90               | 1.03          | :15                | 1.71         | .2712         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :37                  | 2.70              | 1.21          | :18                | 1.82         | .3594         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :42                  | 5.64              | 1.68          | :30                | 1.11         | .6553         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :46                  | 2.40              | 1.84          | :40                | .674         | .8039         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :51                  | 1.08              | 1.93          | :50                | .522         | .9035         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 12:46p               | .20               | 1.98          | 1:20               | .243         | 1.0820        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 1:46e                | 0.01              | 1.99          | 3:00               | .014         | 1.2363        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 |                      |                   |               | 5:00 <sup>1/</sup> | .003         | 1.2488        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 6-15-57              | Raingage          | A-31-R        |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 10:58a               | 0                 | 0             |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | 11:02                | 1.05              | .07           |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :08                  | 1.60              | .23           |                    |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                 | :10                  | 2.10              | .30           |                    |              |               |
| Notes: Weighted precipitation for storm of 6-15-57 <u>1.95</u> inches by Thiesen method.<br><sup>1/</sup> Second storm of June 15, 1957 began.                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                 |                      |                   |               |                    |              |               |

| Hastings, Nebraska                 |                      |                    | Watershed W-3 (44.1) |                      |                  | Area - 481 acres |                 |                  |
|------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions              |                      |                    | Rainfall             |                      |                  | Runoff           |                 |                  |
| Date                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 15, 1957 - Continued |                      |                    |                      |                      |                  |                  |                 |                  |
|                                    |                      |                    | :16                  | 1.20                 | .42              |                  |                 |                  |
|                                    |                      |                    | :21                  | 1.32                 | .53              |                  |                 |                  |
|                                    |                      |                    | :25                  | 2.70                 | .71              |                  |                 |                  |
|                                    |                      |                    | :32                  | 1.55                 | .89              |                  |                 |                  |
|                                    |                      |                    | :38                  | 1.50                 | 1.04             |                  |                 |                  |
|                                    |                      |                    | :43                  | 3.00                 | 1.29             |                  |                 |                  |
|                                    |                      |                    | :46                  | 5.20                 | 1.55             |                  |                 |                  |
|                                    |                      |                    | :50                  | 2.25                 | 1.70             |                  |                 |                  |
|                                    |                      |                    | :55                  | .96                  | 1.78             |                  |                 |                  |
|                                    |                      |                    | 12:00p               | .48                  | 1.82             |                  |                 |                  |
|                                    |                      |                    | :10e                 | .24                  | 1.86             |                  |                 |                  |
|                                    |                      |                    | 6-15-57              | Raingage             | B-33-R           |                  |                 |                  |
|                                    |                      |                    | 10:59a               | 0                    | 0                |                  |                 |                  |
|                                    |                      |                    | 11:05                | .50                  | .05              |                  |                 |                  |
|                                    |                      |                    | :11                  | 1.30                 | .18              |                  |                 |                  |
|                                    |                      |                    | :15                  | 3.00                 | .38              |                  |                 |                  |
|                                    |                      |                    | :25                  | 1.08                 | .56              |                  |                 |                  |
|                                    |                      |                    | :35                  | 1.62                 | .83              |                  |                 |                  |
|                                    |                      |                    | :45                  | 1.20                 | 1.03             |                  |                 |                  |
|                                    |                      |                    | :55                  | 4.08                 | 1.71             |                  |                 |                  |
|                                    |                      |                    | 12:01p               | 1.50                 | 1.86             |                  |                 |                  |
|                                    |                      |                    | :31e                 | .14                  | 1.93             |                  |                 |                  |
|                                    |                      |                    | 6-15-57              | Raingage             | Met              |                  |                 |                  |
|                                    |                      |                    | 8:30a                | 0                    | 0                |                  |                 |                  |
|                                    |                      |                    | 1:34p e              |                      | 1.97             |                  |                 |                  |
|                                    |                      |                    | 6-15-57              | Raingage             | B-36-R           |                  |                 |                  |
|                                    |                      |                    | 11:04a               | 0                    | 0                |                  |                 |                  |
|                                    |                      |                    | 1:40p e              |                      | 2.09             |                  |                 |                  |
| Notes:                             |                      |                    |                      |                      |                  |                  |                 |                  |

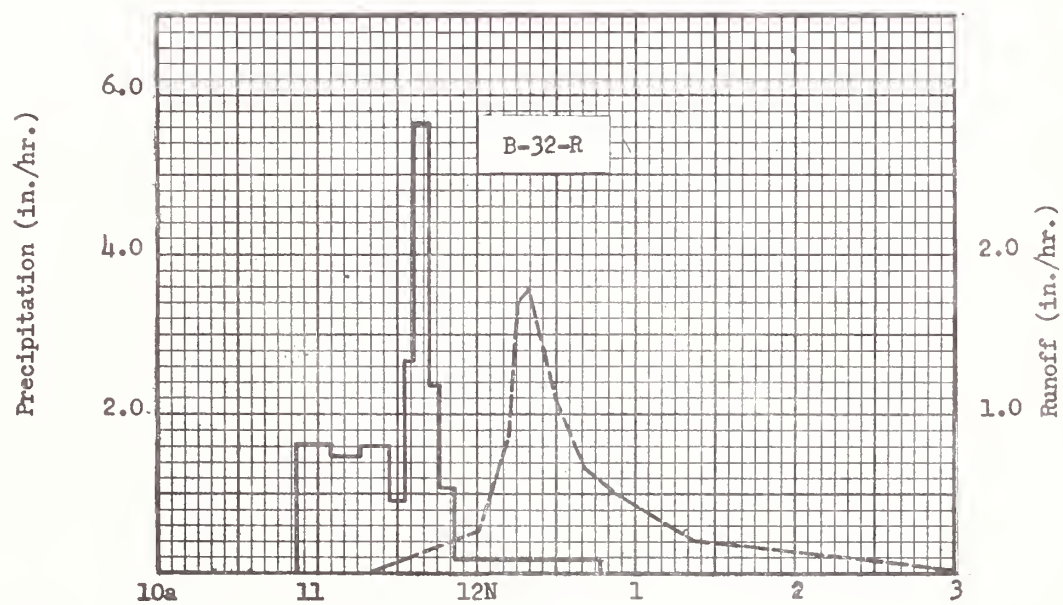




HASTINGS, NEBRASKA WATERSHED W-3

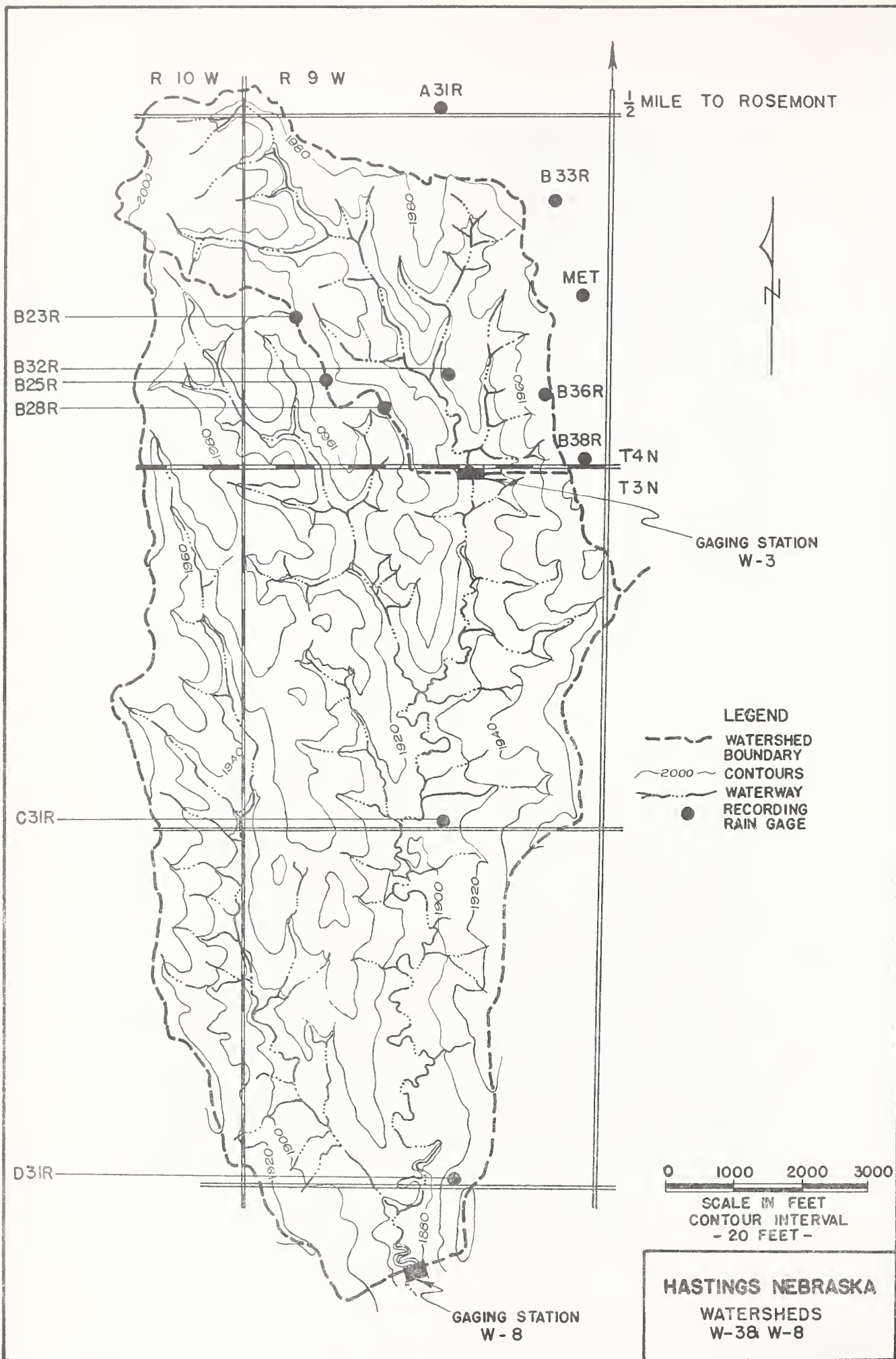


June 7, 1953 pm



June 15, 1957

HASTINGS, NEBRASKA WATERSHED W-3





| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                     |                   |                 | Watershed W-8 1/ (44.3) |                   |               | Area - 2,086 ac. (3.26 sq.mi.) |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|-------------------------|-------------------|---------------|--------------------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                  |                   |                 | Rainfall                |                   |               | Runoff                         |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                   | Rainfall (inches) | Runoff (inches) | Date and time           | Intensity (in/hr) | Acc. (inches) | Date and time                  | Rate (in/hr) | Acc. (inches) |
| Event of June 5, 1942                                                                                                                                                                                                                                                                                                                                                  |                   |                 |                         |                   |               |                                |              |               |
| 5-9,10-42                                                                                                                                                                                                                                                                                                                                                              | 0.66              | 0               | 6-5-42                  | Raingage          | C-31-R        | 6-5-42                         |              |               |
| 5-17                                                                                                                                                                                                                                                                                                                                                                   | .05               | 0               | 4:40p                   | 0                 | 0             | 5:22p                          | 0            | 0             |
| 5-19,20                                                                                                                                                                                                                                                                                                                                                                | .49               | 0               | :43                     | .40               | .02           | 6:00                           | .007         | .0009         |
| 5-21                                                                                                                                                                                                                                                                                                                                                                   | .01               | 0               | 5:00                    | 0                 | .02           | :15                            | .075         | .0084         |
| 5-25                                                                                                                                                                                                                                                                                                                                                                   | .68               | 0               | :06                     | .10               | .03           | :25                            | .151         | .0271         |
| 5-30,31                                                                                                                                                                                                                                                                                                                                                                | .64               | 0               | :15                     | 3.13              | .50           | :29                            | .164         | .0376         |
| 6-1,2                                                                                                                                                                                                                                                                                                                                                                  | .04 2/            | 0               | :19                     | 3.75              | .75           | :45                            | .147         | .0800         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :23                     | 5.25              | 1.10          | 7:00                           | .112         | .1125         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :25                     | 2.70              | 1.19          | :30                            | .070         | .1567         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :29                     | 3.45              | 1.42          | 8:00                           | .057         | .1880         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :31                     | 7.80              | 1.68          | 9:00                           | .082         | .2539         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :33                     | 4.20              | 1.82          | :15                            | .084         | .2747         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :37                     | 2.25              | 1.97          | :30                            | .083         | .2956         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :45                     | 1.05              | 2.11          | 10:00                          | .075         | .3351         |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 6:30 e                  | .36               | 2.38          | 12:00                          | .037         | .4462         |
| Watershed Conditions: The corn was about 2" high. The oats 14", wheat 18", and barley 14" high and heading out. The meadow was well covered and about 10" high. The pastures were in good condition with grass about 3" high. Very little sorghum planted to date. Predominately straight-row farmed. The land use in percentage of the watershed area was as follows: |                   |                 | 6-5-42                  | Raingage          | A-31-R        | 6-6-42                         |              |               |
| Corn . . . . . 28%                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 5:11p                   | 0                 | 0             | 6:00a                          | .001         | .5101         |
| Sorghum in rows . . . 8%                                                                                                                                                                                                                                                                                                                                               |                   |                 | :15                     | 1.80              | .12           | 6:00p                          | T            | .5154         |
| Wheat . . . . . 18%                                                                                                                                                                                                                                                                                                                                                    |                   |                 | :22                     | .43               | .17           | 12:00e 2/                      | T            | .5160         |
| Oats . . . . . 8%                                                                                                                                                                                                                                                                                                                                                      |                   |                 | :27                     | 3.24              | .44           |                                |              |               |
| Barley . . . . . 5%                                                                                                                                                                                                                                                                                                                                                    |                   |                 | :30                     | 2.60              | .57           |                                |              |               |
| Pasture . . . . . 19%                                                                                                                                                                                                                                                                                                                                                  |                   |                 | :39                     | 1.00              | .72           |                                |              |               |
| Roads . . . . . 2%                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :43                     | 1.65              | .83           |                                |              |               |
| Rye . . . . . 2%                                                                                                                                                                                                                                                                                                                                                       |                   |                 | :50                     | .17               | .85           |                                |              |               |
| Alfalfa . . . . . 2%                                                                                                                                                                                                                                                                                                                                                   |                   |                 | 6:00                    | .36               | .91           |                                |              |               |
| Fallow . . . . . 3%                                                                                                                                                                                                                                                                                                                                                    |                   |                 | :50 e                   | .02               | .93           |                                |              |               |
| Meadow . . . . . 4%                                                                                                                                                                                                                                                                                                                                                    |                   |                 | 6-5-42                  | Raingage          | B-28-R        |                                |              |               |
| Farmsteads . . . . . 1%                                                                                                                                                                                                                                                                                                                                                |                   |                 | 4:40p                   | 0                 | 0             |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 5:14                    | .56               | .32           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :19                     | 2.28              | .51           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :22                     | 4.20              | .72           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :31                     | 2.20              | 1.05          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :36                     | 3.12              | 1.31          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :50                     | .73               | 1.48          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 6:00                    | .24               | 1.52          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :50 e                   | .04               | 1.55          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 6-5-42                  | Raingage          | D-31-R        |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 5:02p                   | 0                 | 0             |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :05                     | 1.00              | .05           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :12                     | 1.71              | .25           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :22                     | 1.32              | .47           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :31                     | 2.80              | .89           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :35                     | 3.15              | 1.10          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | :48                     | 1.34              | 1.39          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                        |                   |                 | 6:56 e                  | .13               | 1.53          |                                |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 2103.49.                                                                                                                                                                                                                                                                                                         |                   |                 |                         |                   |               |                                |              |               |
| Weighted precipitation for storm of 6-5-42 1.75 inches by Thiessen method.                                                                                                                                                                                                                                                                                             |                   |                 |                         |                   |               |                                |              |               |
| 1/ Watershed map for W-3, Hastings also applicable to W-8, Hastings.                                                                                                                                                                                                                                                                                                   |                   |                 |                         |                   |               |                                |              |               |
| 2/ All antecedent rainfall for W-8 is weighted using Thiessen method.                                                                                                                                                                                                                                                                                                  |                   |                 |                         |                   |               |                                |              |               |
| 3/ No appreciable runoff after 12:01 am 6-7-42.                                                                                                                                                                                                                                                                                                                        |                   |                 |                         |                   |               |                                |              |               |



| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of July 10, 1951                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                    |                  |                      |                  |                  |                 |                  |
| 6-13,14-51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.78                 | 0.174              | 7-10-51          | Raingage             | C-31-R           | 7-10-51          |                 |                  |
| 6-17,18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .12                  | .003               | 4:52a            | 0                    | 0                | 6:07a            | 0               | 0                |
| 6-20,21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | .49                  | .001               | :56              | 3.15                 | .21              | :20              | .059            | .0054            |
| 6-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .86                  | .298               | 5:02             | 1.00                 | .31              | :30              | .110            | .0187            |
| 6-25,26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.73                 | .883               | :46              | .01                  | .32              | :40              | .230            | .0464            |
| 6-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .09                  | 0                  | :56              | .30                  | .37              | :50              | .325            | .0934            |
| 6-29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .02                  | 0                  | 6:02             | 2.90                 | .66              | :58              | .344            | .1385            |
| 7-5,6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | .01                  | 0                  | :10              | 6.30                 | 1.50             | 7:12             | .317            | .2160            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :14              | 4.95                 | 1.83             | :30              | .264            | .3034            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :22              | 2.48                 | 2.16             | :40              | .244            | .3454            |
| Watershed Conditions: The corn was 20-30" high and in good condition; the oats 16-18" in poor condition and heading out; wheat was 18" to 20" high in fair to good condition; the meadow was 12"-16" high in good condition; and the pasture was in good condition with the grass 4-5" high. Watershed predominately straight row farmed. The land use (partly estimated) in percentage of the watershed area was as follows:<br>Corn . . . . . 28%<br>Wheat . . . . . 25%<br>Pasture . . . . . 18%<br>Sorghum in rows . . . . . 1%<br>Oats . . . . . 12%<br>Alfalfa . . . . . 6%<br>Fallow . . . . . 3%<br>Farmsteads . . . . . 2%<br>Meadow . . . . . 3%<br>Roads . . . . . 2% |                      |                    | :30              | 1.28                 | 2.33             | 8:00             | .352            | .4454            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :34              | 3.00                 | 2.53             | :16              | .321            | .5359            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :40              | 2.90                 | 2.82             | :38              | .271            | .6471            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :50              | .96                  | 2.98             | 9:00             | .231            | .7388            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :56              | .20                  | 3.00             | :30              | .193            | .8441            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 7:12             | .22                  | 3.06             | 10:10            | .152            | .9589            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 8:12             | .02                  | 3.08             | 11:16            | .100            | 1.0941           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 10:42e           | .01                  | 3.10             | 12:08p           | .077            | 1.1700           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    |                  |                      |                  | 2:16             | .031            | 1.2833           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    |                  |                      |                  | 4:16             | .005            | 1.3128           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 7-10-51          | Raingage             | A-31-R           | 5:32p1/          | .002            | 1.3165           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 4:59a            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 5:01             | .90                  | .03              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :06              | 1.92                 | .19              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :10              | .15                  | .20              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :42              | 0                    | .20              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :50              | .22                  | .23              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :54              | 1.05                 | .30              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6:10             | 2.66                 | 1.01             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :20              | 1.86                 | 1.32             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :32              | 1.25                 | 1.57             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :38              | 2.10                 | 1.78             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :48              | 1.02                 | 1.95             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :58              | .42                  | 2.02             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 7:48             | .05                  | 2.06             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 10:48e           | T                    | 2.08             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 7-10-51          | Raingage             | B-28-R           |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 4:55a            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 5:00             | 2.16                 | .18              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :04              | .45                  | .21              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :46              | .03                  | .23              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :48              | .30                  | .24              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :50              | 1.80                 | .30              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :56              | 1.40                 | .44              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6:12             | 4.69                 | 1.69             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :16              | 2.70                 | 1.87             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :30              | 1.54                 | 2.23             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :34              | 3.30                 | 2.45             |                  |                 |                  |

Notes: Weighted precipitation for storm of 7-10-51 2.97 inches by Thiesen method.  
1/ New storm started at approximately 5:32 pm on 7-10-51.

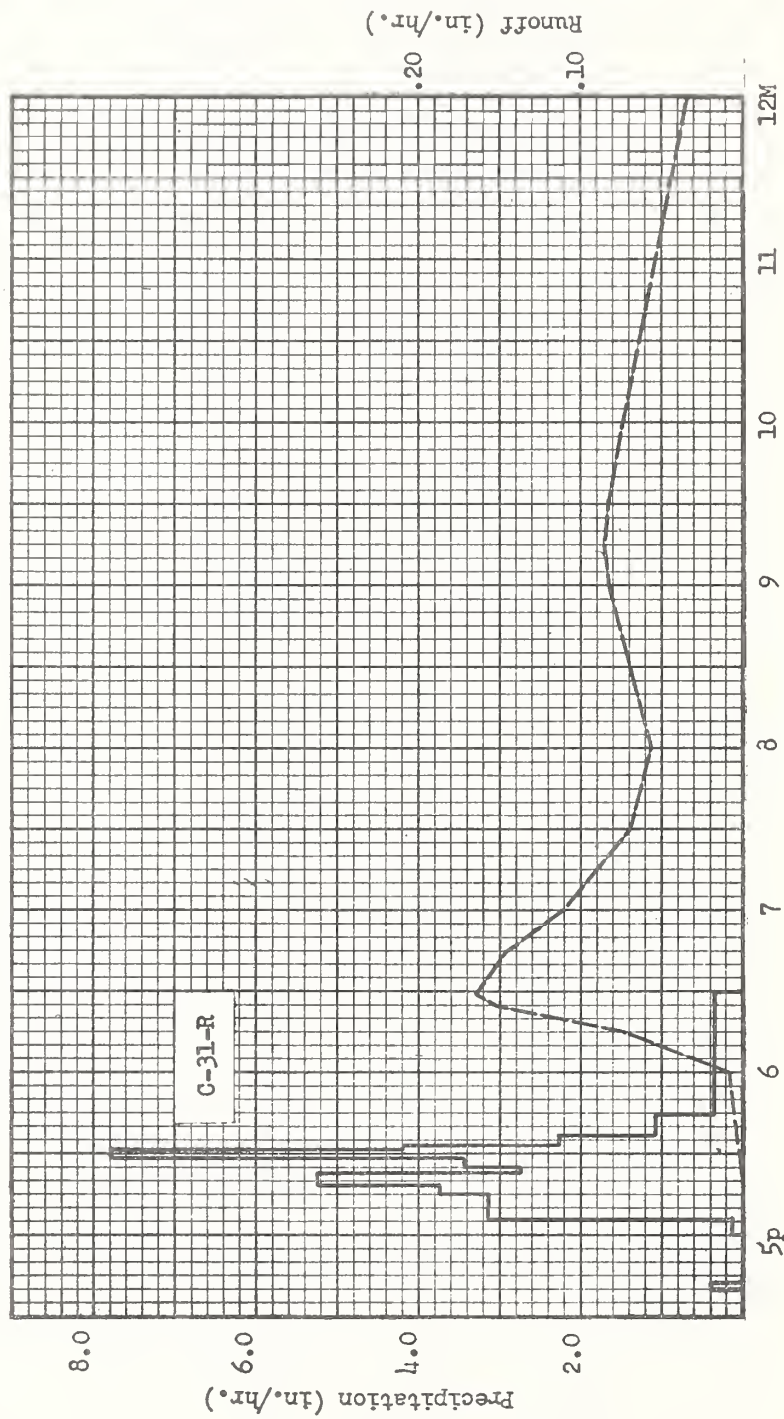
| Hastings, Nebraska                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                 | Watershed W-8 (44.3) |                   |               | Area - 2,086 ac. (3.26 sq.mi.) |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 | Rainfall             |                   |               | Runoff                         |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time                  | Rate (in/hr) | Acc. (inches) |
| Event of July 10, 1951 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                 |                      |                   |               |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :36                  | 2.70              | 2.54          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :46                  | 1.20              | 2.74          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :52                  | .30               | 2.77          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 7:02                 | .42               | 2.84          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 8:02e                | .05               | 2.89          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 7-10-51              | Raingage          | D-31-R        |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 4:51a                | 0                 | 0             |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :53                  | 2.70              | .09           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :56                  | 1.00              | .14           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 5:46                 | .02               | .16           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :54                  | .15               | .18           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 6:00                 | 3.40              | .52           |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :06                  | 8.70              | 1.39          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :10                  | 5.40              | 1.75          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :18                  | 2.62              | 2.10          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :26                  | 2.02              | 2.37          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :38                  | 3.75              | 3.12          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :44                  | 1.40              | 3.26          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :54                  | .54               | 3.35          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 7:10                 | .30               | 3.43          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :30                  | .06               | 3.45          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :35                  | .24               | 3.47          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :45                  | .12               | 3.49          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 9:15                 | .01               | 3.50          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 11:30                | T                 | 3.51          |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :36e                 | .30               | 3.54          |                                |              |               |
| Event of June 7, 1953                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                 |                      |                   |               |                                |              |               |
| 5-10-53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.10              | 0               | 6-7-53               | Raingage          | C-31-R        | 6-7-53                         |              |               |
| 5-16, 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | .46               | 0               | 4:52p                | 0                 | 0             | 4:52p                          | 0            | 0             |
| 5-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.29              | 0.420           | :56                  | .75               | .05           | 5:20                           | .014         | .0010         |
| 6-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .19               | 0               | 5:02                 | 3.00              | .35           | 5:36                           | .089         | .0138         |
| 6-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | .48               | 0               | :08                  | 3.20              | .67           | :50                            | .242         | .0534         |
| Watershed Conditions: The corn was about 7" high, wheat about 20", oats 12", sorghum 3", meadow 6", and pasture 3" high. Crops in fair condition. Corn was planted about May 15. Watershed predominately straight-row farmed. The land use (partly estimated) in percentage of the watershed area was as follows:<br>Corn . . . . . 38%<br>Wheat . . . . . 5%<br>Pasture . . . . . 18%<br>Sorghum in rows . . . . . 7%<br>Oats . . . . . 13%<br>Alfalfa . . . . . 6%<br>Fallow . . . . . 6%<br>Farmsteads . . . . . 2%<br>Meadow . . . . . 3%<br>Roads . . . . . 2% |                   |                 | :20                  | 1.55              | .98           | 6:00                           | .264         | .0963         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :26                  | 2.20              | 1.20          | :10                            | .252         | .1393         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :32                  | 1.50              | 1.35          | :30                            | .205         | .2155         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :40                  | 1.12              | 1.50          | :54                            | .155         | .2866         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :56                  | .52               | 1.64          | 7:28                           | .231         | .3956         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 6:12                 | .41               | 1.75          | :48                            | .212         | .4694         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :18                  | .50               | 1.80          | 8:30                           | .138         | .5916         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :30e                 | .10               | 1.82          | 9:00                           | .091         | .6489         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                      |                   |               | 12:00                          | .024         | .8174         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 6-7-53               | Raingage          | A-31-R        | 6-8-53                         |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 4:51p                | 0                 | 0             |                                |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :54                  | 2.20              | .11           | 6:00a                          | .002         | .8541         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :59                  | 2.64              | .33           | 6:00p                          | T            | .8626         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | 5:08                 | 2.66              | .73           | 6-9-53                         |              |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 | :20                  | 1.35              | 1.00          | 6:00a                          | T            | .8644         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                      |                   |               | 9:30p                          | 0            | .8644         |
| Notes: Weighted precipitation for storm of 6-7-53 <u>1.71</u> inches by Thiessen method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                 |                      |                   |               |                                |              |               |

| Antecedent conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 7, 1953 - Continued                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                    |                  |                      |                  |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :28              | 1.28                 | 1.17             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :40              | 1.00                 | 1.37             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6:00             | .30                  | 1.47             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :16              | .30                  | 1.55             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :22e             | .30                  | 1.58             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6-7-53           | Raingage             | B-28-R           |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 4:50p            | 0                    | 0                |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :54              | 1.20                 | .08              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 5:01             | 2.31                 | .35              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :07              | 3.20                 | .67              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :15              | 1.58                 | .88              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :23              | 1.12                 | 1.03             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :44              | 1.00                 | 1.38             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6:00             | .34                  | 1.47             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :16              | .38                  | 1.57             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :36e             | .06                  | 1.59             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 6-7-53           | Raingage             | D-31-R           |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | Note:            | Clock Stopped        |                  |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | Total:           |                      | 2.04             |                  |                 |                  |
| Event of August 28, 1957                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |
| 8-2-57                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.75                 | 0.                 | 8-28-57          | Raingage             | D-31-R           | 8-29-57          |                 |                  |
| 8-15,16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.22                 | .073               | 11:53p           | 0                    | 0                | 12:07a           | 0               | 0                |
| 8-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .01                  | 0                  | :59              | .50                  | .05              | :40              | .010            | .0021            |
| 8-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .09                  | 0                  | 8-29-57          |                      |                  | 1:03             | .060            | .0156            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 12:05a           | 1.40                 | .19              | :30              | .115            | .0547            |
| Watershed Conditions: Wheat and<br>oats harvested; sorghum 3-5' high<br>and headed; corn badly damaged by<br>grasshoppers, in dented stages;<br>meadow, recently cut, 4" high and<br>in good condition; pastures 6"<br>high and in good condition. Water-<br>shed predominately straight-row<br>farmed. The land use in percent-<br>age of the watershed area was as<br>follows:<br>Alfalfa . . . . . 9%<br>Corn . . . . . 7%<br>Fallow . . . . . 14%<br>Farmsteads . . . . . 2%<br>Meadow . . . . . 3%<br>Oats . . . . . 3%<br>Pasture . . . . . 21%<br>Roads . . . . . 2%<br>Sorghum drilled . . . . . 1%<br>Sorghum in rows . . . . . 26%<br>Sweet Clover . . . . . 1%<br>Wheat . . . . . 11% |                      |                    | :11              | 1.90                 | .38              | 2:00             | .198            | .1365            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :13              | 7.50                 | .63              | :30              | .217            | .2411            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :21              | 4.65                 | 1.25             | 3:00             | .201            | .3462            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :27              | 4.70                 | 1.72             | :40              | .174            | .4714            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :31              | 2.40                 | 1.88             | :56              | .170            | .5173            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :37              | 1.00                 | 1.98             | 4:30             | .192            | .6190            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :47              | .96                  | 2.14             | 5:05             | .204            | .7357            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 1:13             | .78                  | 2.48             | 6:00             | .184            | .9164            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 2:03             | .23                  | 2.67             | 8:00             | .090            | 1.1888           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 4:03a            | .10                  | 2.86             | 12:00            | .007            | 1.3187           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 1:08p e          | .01                  | 2.92             | 6:00p            | .001            | 1.3345           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 8-28-57          | Raingage             | A-31-R           | 8-30-57          |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 11:58p           | 0                    | 0                | 6:00a            | T               | 1.3373           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 8-29-57          |                      |                  | 10:00p e         | 0               | 1.3375           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 12:10a           | .35                  | .07              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :20              | 1.20                 | .27              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :26              | 2.60                 | .53              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :29              | 3.60                 | .71              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :39              | 1.02                 | .88              |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | :46              | 1.20                 | 1.02             |                  |                 |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                    | 1:00             | .77                  | 1.20             |                  |                 |                  |

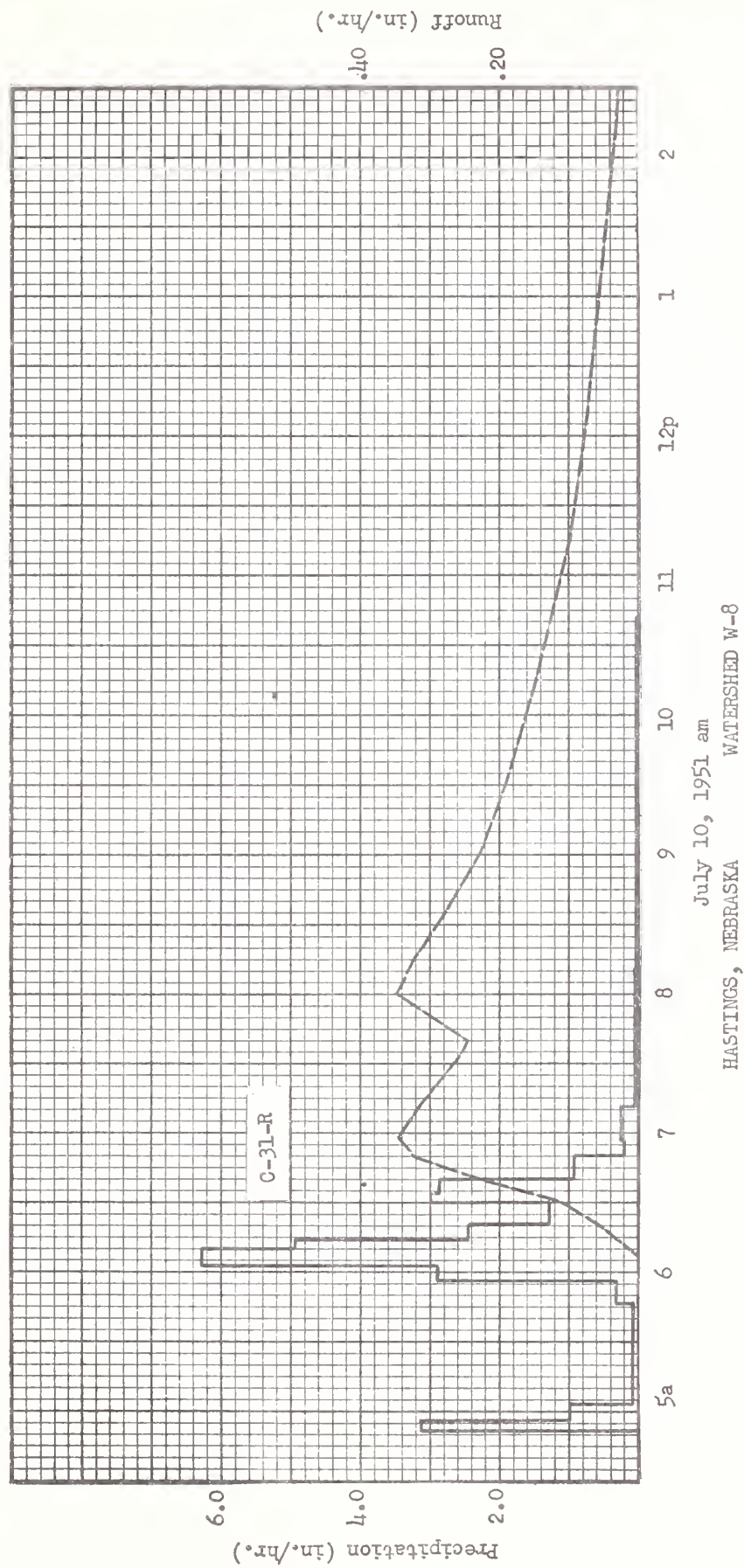
Notes: Weighted precipitation for storm of 8-28-57 2.38 inches by Thiesen method.

| Hastings, Nebraska                   |                      |                    | Watershed W-8 (44.3) |                      |                  | Area - 2,086 ac. (3.26 sq.mi.) |                 |                  |
|--------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|--------------------------------|-----------------|------------------|
| Antecedent conditions                |                      |                    | Rainfall             |                      |                  | Runoff                         |                 |                  |
| Date                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time               | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of August 28, 1957 - Continued |                      |                    |                      |                      |                  |                                |                 |                  |
|                                      |                      |                    | :10                  | 1.62                 | 1.47             |                                |                 |                  |
|                                      |                      |                    | :30                  | 1.50                 | 1.97             |                                |                 |                  |
|                                      |                      |                    | 2:30                 | .14                  | 2.11             |                                |                 |                  |
|                                      |                      |                    | 8:30                 | T                    | 2.13             |                                |                 |                  |
|                                      |                      |                    | 10:00e               | .02                  | 2.15             |                                |                 |                  |
|                                      |                      |                    | 8-28-57              | Raingage             | B-32-R           |                                |                 |                  |
|                                      |                      |                    | 11:50p               | 0                    | 0                |                                |                 |                  |
|                                      |                      |                    | 8-29-57              |                      |                  |                                |                 |                  |
|                                      |                      |                    | 12:03a               | .37                  | .08              |                                |                 |                  |
|                                      |                      |                    | :14                  | .76                  | .22              |                                |                 |                  |
|                                      |                      |                    | :28                  | 2.57                 | .82              |                                |                 |                  |
|                                      |                      |                    | :43                  | .76                  | 1.01             |                                |                 |                  |
|                                      |                      |                    | :56                  | 1.01                 | 1.23             |                                |                 |                  |
|                                      |                      |                    | 1:09                 | 1.06                 | 1.45             |                                |                 |                  |
|                                      |                      |                    | :32                  | 1.17                 | 1.90             |                                |                 |                  |
|                                      |                      |                    | 3:02                 | .09                  | 2.04             |                                |                 |                  |
|                                      |                      |                    | 9:00                 | 0                    | 2.04             |                                |                 |                  |
|                                      |                      |                    | 11:30e               | .01                  | 2.07             |                                |                 |                  |
|                                      |                      |                    | 8-28-57              | Raingage             | C-31-R           |                                |                 |                  |
|                                      |                      |                    | Note:                | Clock stopped        |                  |                                |                 |                  |
|                                      |                      |                    | Total                |                      | 2.50             |                                |                 |                  |
| Notes:                               |                      |                    |                      |                      |                  |                                |                 |                  |



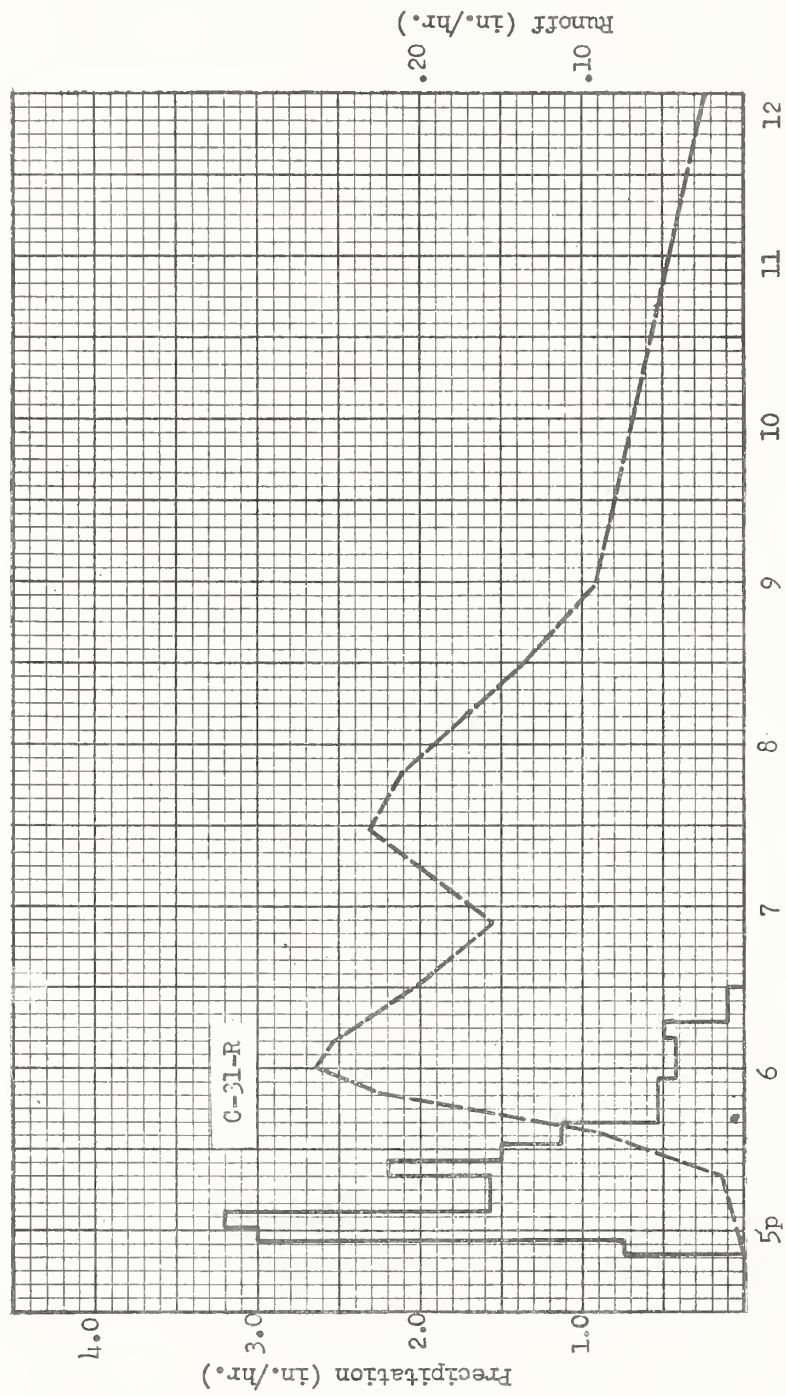


June 5, 1942 pm  
HASTINGS, NEBRASKA  
WATERSHED W-8



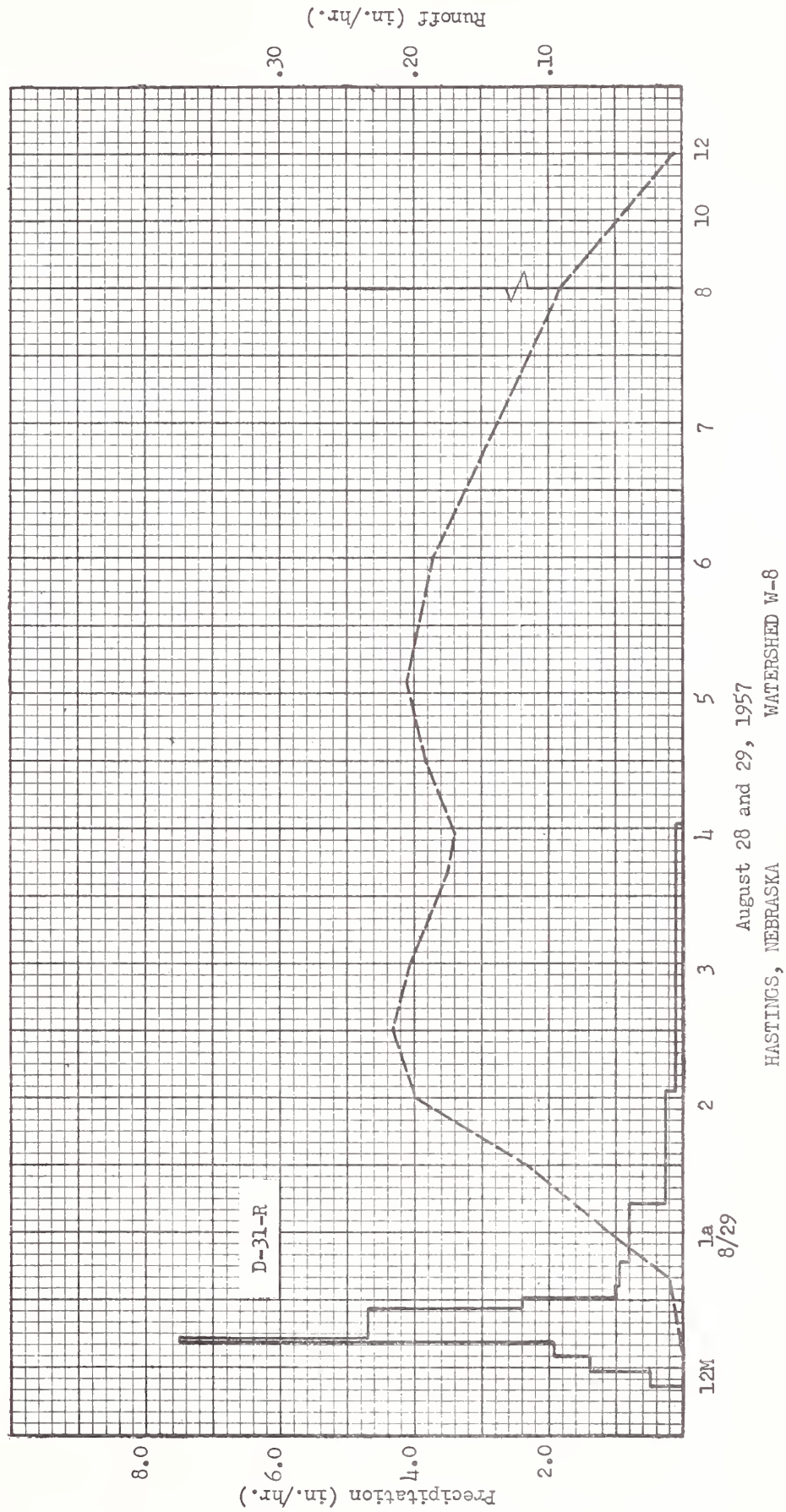
July 10, 1951 am  
HASTINGS, NEBRASKA  
WATERSHED W-8

C-31-R



June 7, 1953  
HASTINGS, NEBRASKA WATERSHED W-8









| Safford, Arizona                                                                                                                                                                                                                     |                      |                    | Watershed W-II   |                      |                  | (45.2)           |                 |                  | Area - 682 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of July 26, 1940                                                                                                                                                                                                               |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 6-23-40                                                                                                                                                                                                                              | 0.46                 | 0.0213             | 7-26-40          | Raingage             | R-4              | 7-26-40          |                 |                  |                  |  |  |
| 6-26                                                                                                                                                                                                                                 | .15                  | 0.                 | 2:40 p           | 0.                   | 0.               | 2:52 p           | 0.              | 0.               |                  |  |  |
| 7-12                                                                                                                                                                                                                                 | .04                  | 0.                 | :48              | 1.88                 | .25              | :53              | .062            | .0015            |                  |  |  |
| 7-17                                                                                                                                                                                                                                 | .04                  | 0.                 | :56              | 3.38                 | .70              | :56              | .151            | .0071            |                  |  |  |
| 7-20                                                                                                                                                                                                                                 | .03                  | 0.                 | 3:04             | 1.20                 | .86              | 3:00             | .306            | .0204            |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 75% of area is bare. Vegetative cover is about equally divided between short grasses (black, hairy and side-oats grama) and shrubs (creosotebush, beargrass and mesquite). |                      |                    | :18e             | .36                  | .98              | :01              | .435            | .0266            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :03              | .577            | .0438            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :05              | .696            | .0652            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :07              | .798            | .0902            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :09              | .901            | .1184            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :10              | .961            | .1339            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :11              | 1.01            | .1503            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :12              | .887            | .1665            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :13              | .887            | .1813            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :14              | .787            | .1952            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :15              | .687            | .2080            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :17              | .503            | .2273            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :22              | .339            | .2622            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :27              | .218            | .2852            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :32              | .151            | .3006            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :42              | .074            | .3180            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :54              | .036            | .3284            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 4:05             | .021            | .3335            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 5:30e            | 0.              | .3414            |                  |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 687.68                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |

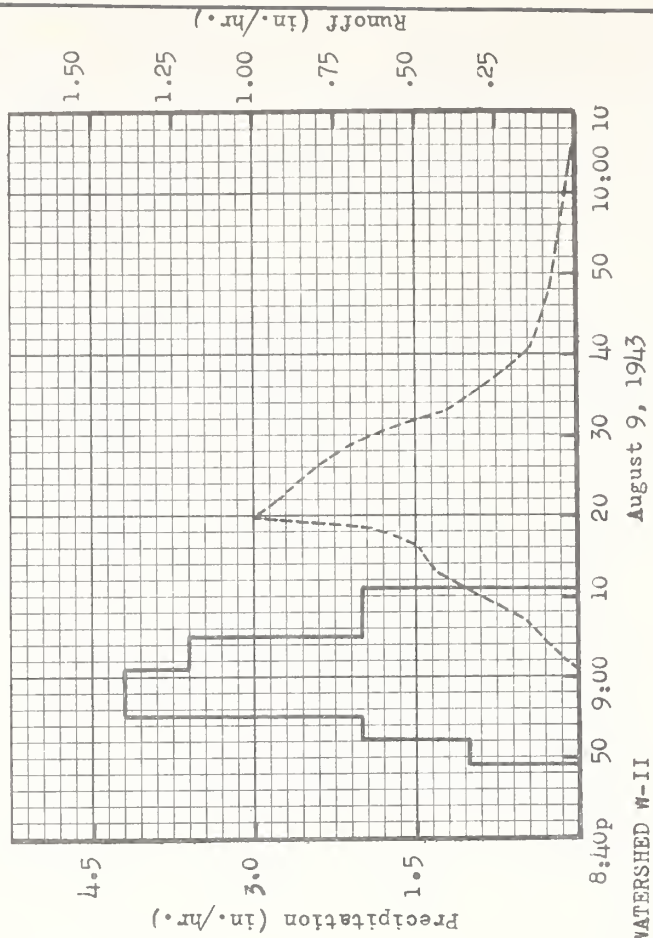
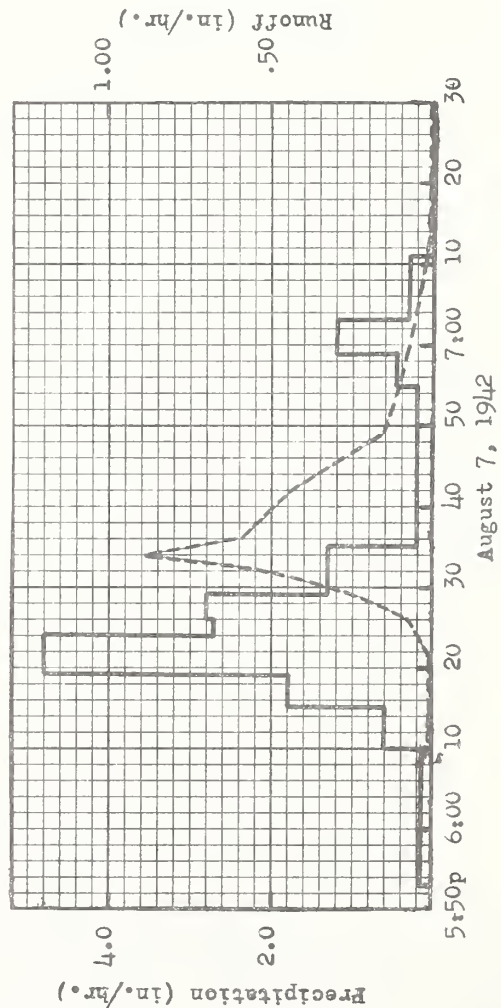
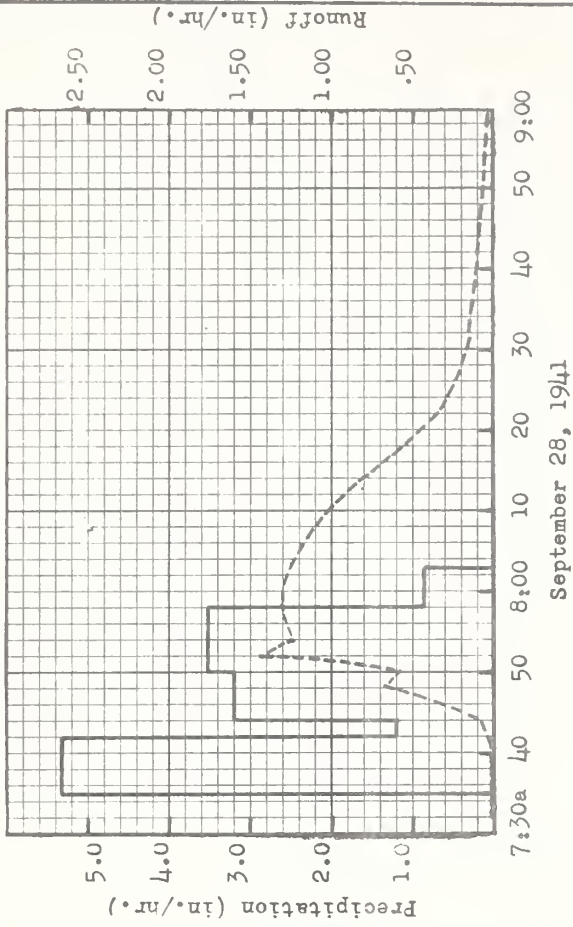
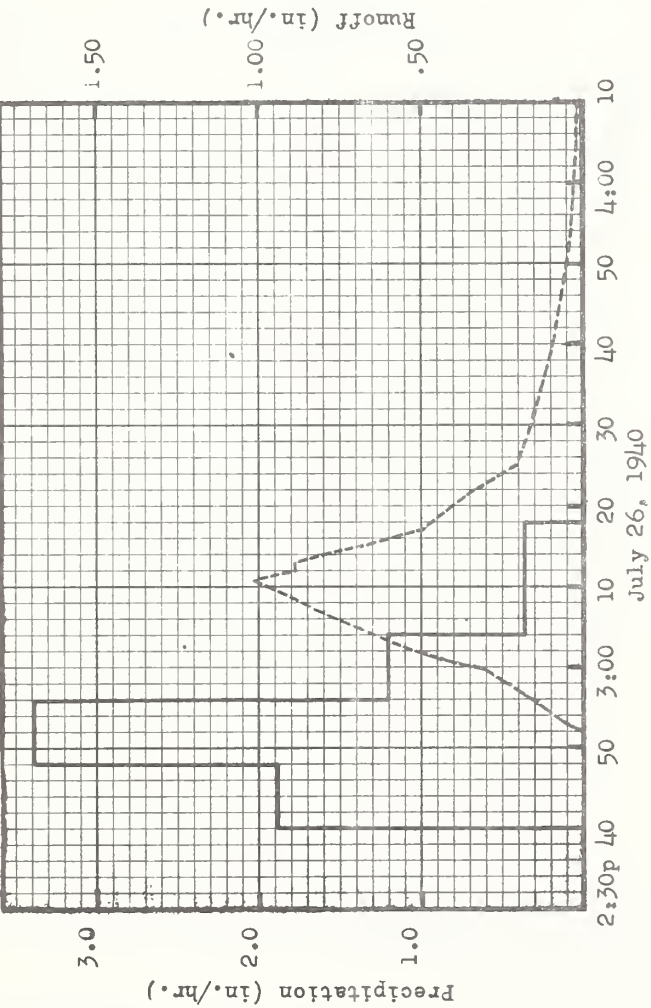
| Safford, Arizona                                                                                                                                                                                                                     |                      |                    | Watershed W-II   |                      |                  | (45.2)           |                 |                  | Area - 682 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of September 28, 1941                                                                                                                                                                                                          |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 8-28-41                                                                                                                                                                                                                              | 0.08                 | 0.                 | 9-28-41          | Raingage R-4         |                  | 9-28-41          |                 |                  |                  |  |  |
| 9-12                                                                                                                                                                                                                                 | .37                  | 0.                 | 7:35 a           | 0.01                 | 0.04             | 7:32 a           | 0.              | 0.               |                  |  |  |
| 9-13                                                                                                                                                                                                                                 | .31                  | 0.                 | 1:42             | 5.32                 | .66              | 1:41             | .016            | .0013            |                  |  |  |
| 9-17                                                                                                                                                                                                                                 | .40                  | 0.                 | 1:44             | 1.20                 | .70              | 1:44             | .096            | .0027            |                  |  |  |
| 9-18                                                                                                                                                                                                                                 | .06                  | 0.                 | 1:50             | 3.20                 | 1.02             | 1:46             | .273            | .0084            |                  |  |  |
| 9-22                                                                                                                                                                                                                                 | .02                  | 0.                 | 1:58             | 3.52                 | 1.49             | 1:47             | .461            | .0140            |                  |  |  |
| 9-27                                                                                                                                                                                                                                 | .10                  | 0.                 | 8:03a            | .84                  | 1.56             | 1:48             | .683            | .0235            |                  |  |  |
| *9-28                                                                                                                                                                                                                                | .65                  | .09                |                  |                      |                  | 1:50             | .593            | .0454            |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 75% of area is bare. Vegetative cover is about equally divided between short grasses (black, hairy and side-oats grama) and shrubs (creosotebush, beargrass and mesquite). |                      |                    |                  |                      |                  | 1:51             | .861            | .0575            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:52             | 1.45            | .0768            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:53             | 1.35            | .1001            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:54             | 1.22            | .1215            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:55             | 1.26            | .1421            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:57             | 1.30            | .1847            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:59             | 1.31            | .2281            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 8:00             | 1.30            | .2499            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:02             | 1.28            | .2927            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:04             | 1.24            | .3350            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:07             | 1.15            | .3948            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:11             | .974            | .4662            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:16             | .693            | .5378            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:18             | .580            | .5592            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:22             | .352            | .5897            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:26             | .247            | .6098            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:33             | .155            | .6328            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:40             | .104            | .6478            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 1:52             | .057            | .6636            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 9:10             | .027            | .6753            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 11:30a           | 0.              | .6899            |                  |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 687.68. \*Runoff event occurred on 9/28 to 2 a.m. to 4 a.m.; completely separate from the event reported for 9/28/41.

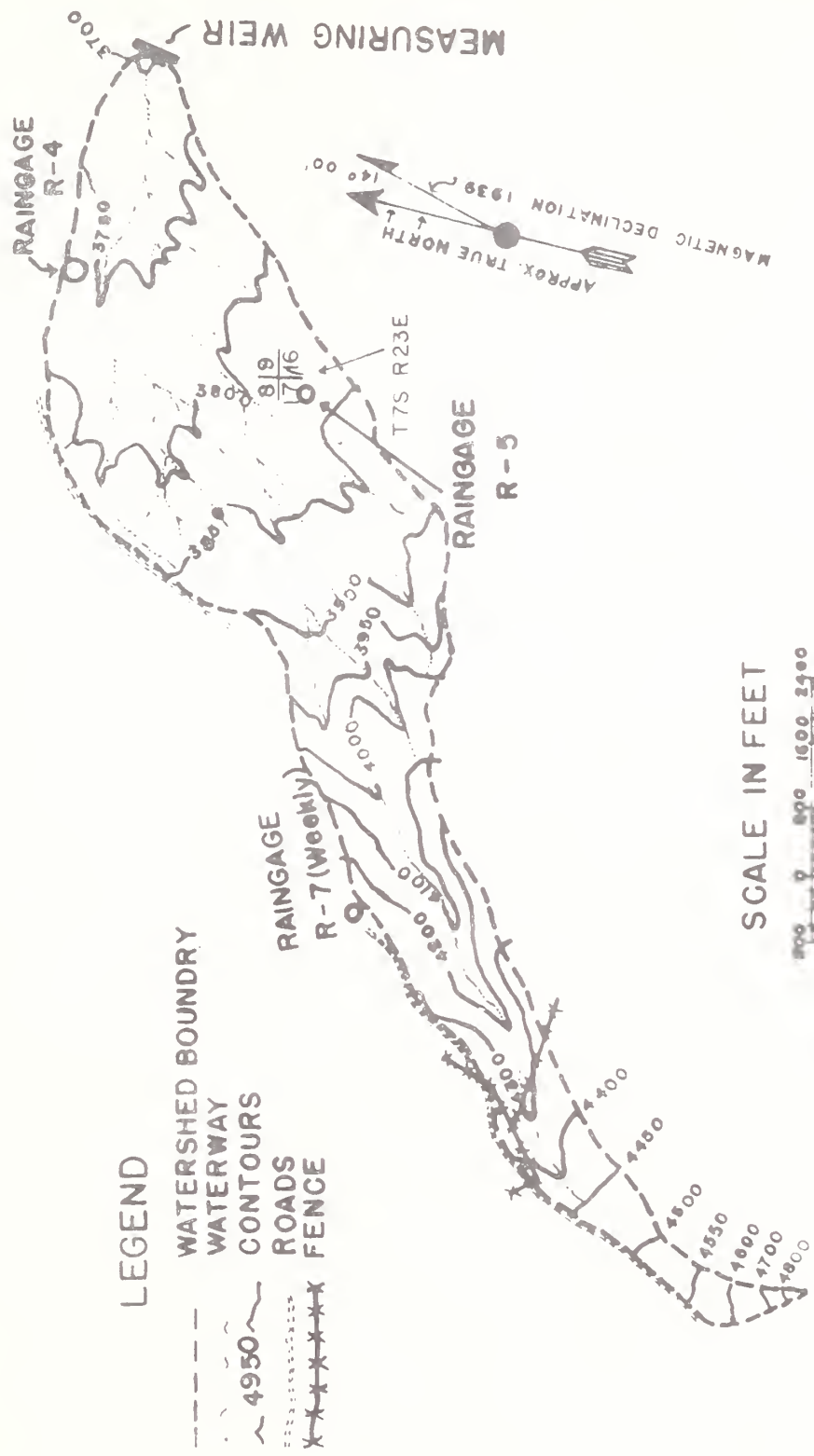
Notes: To convert runoff in in/hr to cfs, multiply by 687.68. \*Runoff event occurred on 9/28 to 2 a.m. to 4 a.m.; completely separate from the event reported for 9/28/41.

| Safford, Arizona                                                                                                                                                                                                                     |                      |                    | Watershed W-II   |                      |                  | (45.2)           |                 |                  | Area - 682 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of August 7, 1942                                                                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 7-1-42                                                                                                                                                                                                                               | 0.14                 | 0.                 | 8-7-42           | Raingage             | R-4              | 8-7-42           |                 |                  |                  |  |  |
| 7-14                                                                                                                                                                                                                                 | .09                  | 0.                 | 5:53 p           | 0.                   | 0.               | 6:04 p           | 0.              | 0.               |                  |  |  |
| 7-16                                                                                                                                                                                                                                 | .87                  | .0125              | 6:10             | .18                  | .05              | :10              | .009            | .0002            |                  |  |  |
| 7-21                                                                                                                                                                                                                                 | .26                  | .0003              | :15              | .60                  | .10              | :19              | .005            | .0014            |                  |  |  |
| 7-24                                                                                                                                                                                                                                 | .07                  | 0.                 | :19              | 1.80                 | .22              | :21              | .009            | .0016            |                  |  |  |
| 7-29                                                                                                                                                                                                                                 | .11                  | 0.                 | :24              | 4.80                 | .62              | :26              | .081            | .0052            |                  |  |  |
| 7-31                                                                                                                                                                                                                                 | .15                  | 0.                 | :26              | 2.70                 | .71              | :29              | .246            | .0130            |                  |  |  |
| 8-2                                                                                                                                                                                                                                  | .08                  | 0.                 | :29              | 2.80                 | .85              | :32              | .526            | .0311            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | :35              | 1.30                 | .98              | :33              | .738            | .0416            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | :55              | .21                  | 1.05             | :34              | .848            | .0548            |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 75% of area is bare. Vegetative cover is about equally divided between short grasses (black, hairy and side-oats grama) and shrubs (creosotebush, beargrass and mesquite). |                      |                    | :59              | .45                  | 1.08             | :35              | .747            | .0681            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | 7:03             | 1.20                 | 1.16             | :36              | .599            | .0793            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | :11e             | .30                  | 1.20             | :42              | .436            | .1311            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :49              | .162            | .1679            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 7:15             | .011            | .1939            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :30e             | 0.              | .1954            |                  |  |  |
| Event of August 9, 1943                                                                                                                                                                                                              |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 7-7-43                                                                                                                                                                                                                               | 0.05                 | 0.                 | 8-9-43           | Raingage             | R-5              | 8-9-43           |                 |                  |                  |  |  |
| 7-13                                                                                                                                                                                                                                 | .13                  | 0.                 | 8:49p            | 0.                   | 0.               | 9:01 p           | 0.              | 0.               |                  |  |  |
| 7-14                                                                                                                                                                                                                                 | .16                  | .0108              | :52              | 1.00                 | .05              | :04              | .059            | .0017            |                  |  |  |
| 7-18                                                                                                                                                                                                                                 | .05                  | 0.                 | :55              | 2.00                 | .15              | :07              | .154            | .0074            |                  |  |  |
| 7-19                                                                                                                                                                                                                                 | .13                  | 0.                 | 9:01             | 4.20                 | .57              | :10              | .310            | .0172            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | :05              | 3.60                 | .81              |                  |                 |                  |                  |  |  |
| 7-20                                                                                                                                                                                                                                 | .01                  | 0.                 | :11e             | 2.00                 | 1.01             | :13              | .431            | .0358            |                  |  |  |
| 7-23                                                                                                                                                                                                                                 | .15                  | 0.                 |                  |                      |                  | :16              | .480            | .0588            |                  |  |  |
| 7-31                                                                                                                                                                                                                                 | .43                  | .0190              |                  |                      |                  | :18              | .613            | .0765            |                  |  |  |
| 8-1                                                                                                                                                                                                                                  | .31                  | 0.                 |                  |                      |                  | :19              | .819            | .0884            |                  |  |  |
| 8-2                                                                                                                                                                                                                                  | .28                  | .0083              |                  |                      |                  | :20              | 1.00            | .1036            |                  |  |  |
| 8-7                                                                                                                                                                                                                                  | .27                  | .0095              |                  |                      |                  |                  |                 |                  |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 75% of area is bare. Vegetative cover is about equally divided between short grasses (black, hairy and side-oats grama) and shrubs (creosotebush, beargrass and mesquite). |                      |                    |                  |                      |                  | :22              | .928            | .1356            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :27              | .784            | .2083            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :29              | .699            | .2330            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :33              | .428            | .2698            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :36              | .291            | .2876            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :41              | .146            | .3048            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :48              | .087            | .3186            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :53              | .059            | .3246            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | 10:05            | .030            | .3329            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  | :25              | .010            | .3389            |                  |  |  |
|                                                                                                                                                                                                                                      |                      |                    | 11:30e           | 0.                   | .3431            |                  |                 |                  |                  |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 687.68                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |





SAFFORD, ARIZONA WATERSHED W-II



# LEGEND

- WATERSHED BOUNDARY
- WATERWAY
- CONTOURS
- ROADS
- FENCE

SCALE IN FEET



TOTAL DRAINAGE AREA - 682.4 ACRES  
CONTOUR INTERVAL - 50 FEET

SAFFORD, ARIZONA

WATERSHED W-II



| Colorado Springs, Colorado                                                                                                          |                      |                    | Watershed W-IV   |                      |                  | (46.4)           |                 |                  | Area - 35.6 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                               |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of August 10, 1938                                                                                                            |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-6-38                                                                                                                              | 0.91                 | 0.0182             | 8-10-38          | Raingage             | R-5              | 8-10-38          |                 |                  |                   |  |  |
| 7-7                                                                                                                                 | .15                  | 0.                 | 4:12 p           | 0.                   | 0.               | 4:27 p           | 0.              | 0.               |                   |  |  |
| 7-15                                                                                                                                | .08                  | 0.                 | :14              | .60                  | .02              | :28              | .235            | .002             |                   |  |  |
| 7-18                                                                                                                                | .27                  | 0.                 | :18              | .15                  | .03              | :29              | .250            | .006             |                   |  |  |
| 7-20                                                                                                                                | .24                  | 0.                 | :22              | 3.30                 | .25              | :30              | .167            | .010             |                   |  |  |
| 7-26                                                                                                                                | .28                  | 0.                 | :25              | 4.60                 | .48              | :31              | .204            | .013             |                   |  |  |
| 7-28                                                                                                                                | .03                  | 0.                 | :28              | 6.60                 | .81              | :32              | .245            | .016             |                   |  |  |
|                                                                                                                                     |                      |                    | :29              | 5.40                 | .90              | :33              | .337            | .021             |                   |  |  |
|                                                                                                                                     |                      |                    | :31              | 2.40                 | .98              | :34              | .554            | .029             |                   |  |  |
|                                                                                                                                     |                      |                    | :32              | 6.60                 | 1.09             | :35              | .788            | .040             |                   |  |  |
|                                                                                                                                     |                      |                    | :36              | 3.90                 | 1.35             | :36              | 1.15            | .056             |                   |  |  |
|                                                                                                                                     |                      |                    | :37              | 4.80                 | 1.43             | :37              | 1.60            | .079             |                   |  |  |
|                                                                                                                                     |                      |                    | :42              | 3.00                 | 1.68             | :38              | 1.93            | .108             |                   |  |  |
|                                                                                                                                     |                      |                    | :45              | 3.40                 | 1.85             | :39              | 2.17            | .142             |                   |  |  |
|                                                                                                                                     |                      |                    | :48              | 1.00                 | 1.90             | :40              | 2.29            | .179             |                   |  |  |
|                                                                                                                                     |                      |                    | :52              | .45                  | 1.93             | :41              | 2.33            | .218             |                   |  |  |
|                                                                                                                                     |                      |                    | :54              | .30                  | 1.94             | :42              | 2.33            | .258             |                   |  |  |
|                                                                                                                                     |                      |                    | 5:00             | .20                  | 1.96             | :43              | 2.11            | .298             |                   |  |  |
|                                                                                                                                     |                      |                    | :16e             | .10                  | 1.99             | :44              | 2.06            | .328             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :45              | 1.94            | .362             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :47              | 1.62            | .421             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :49              | 1.35            | .470             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :51              | 1.15            | .518             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :53              | .897            | .546             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :55              | .708            | .573             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :59              | .426            | .611             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | 5:03             | .267            | .634             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :07              | .182            | .649             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :13              | .093            | .662             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :19              | .053            | .669             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | :29              | .019            | .675             |                   |  |  |
|                                                                                                                                     |                      |                    |                  |                      |                  | 6:14e            | 0.              | .679             |                   |  |  |
| Watershed Conditions: Well vegetated rangeland. Cover is predominately blue grama, with small amounts of silver sage and club moss. |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 35.896

Notes: To convert runoff in in/hr to cfs, multiply by 35.896

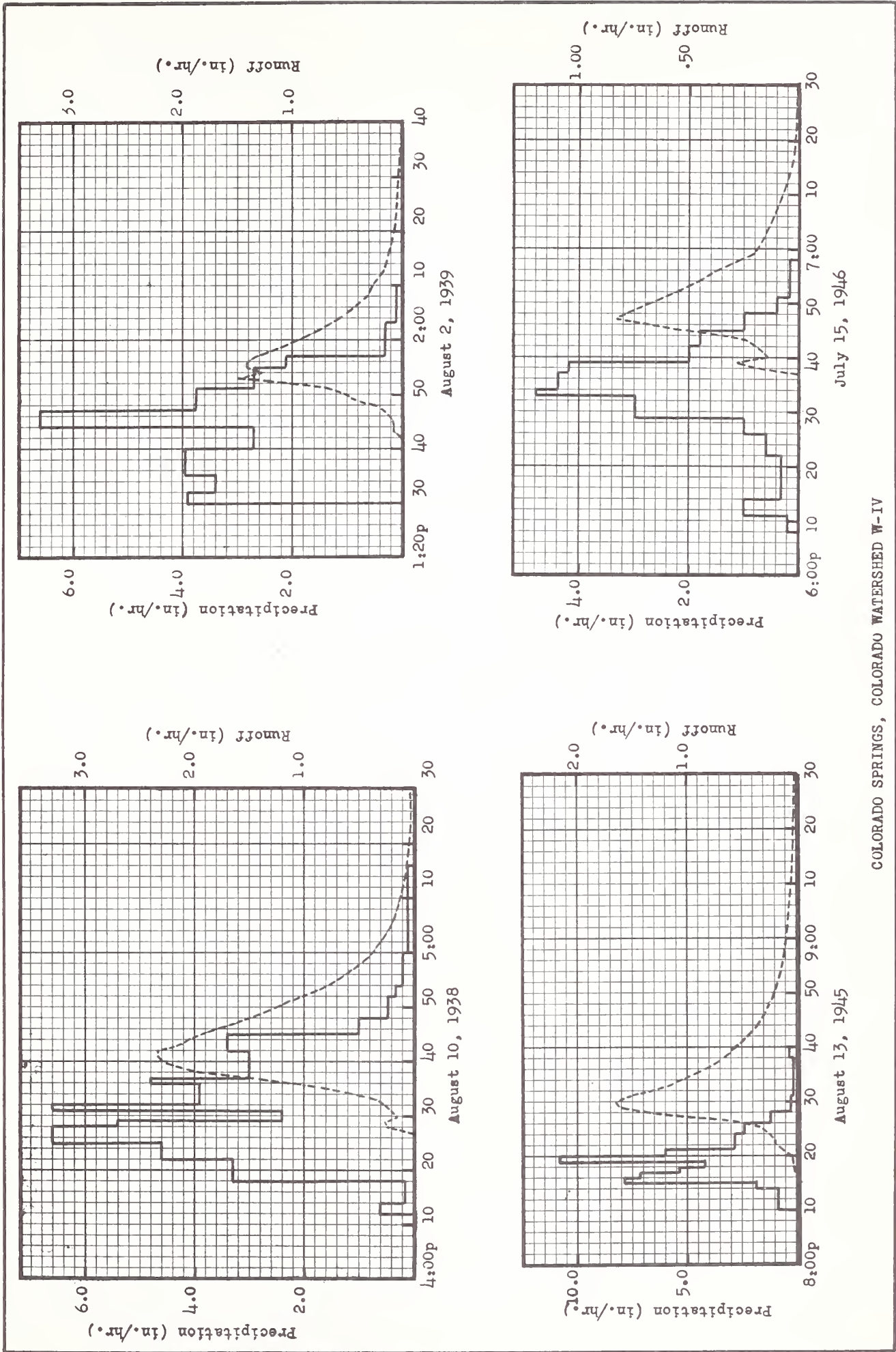


| Colorado Springs, Colorado                                                                                                                      |                                                              |                    | Watershed W-IV   |                      |                  | (46.4)           |                 |                  | Area - 35.6 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                           |                                                              |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                            | Rainfall<br>(inches)                                         | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of August 2, 1939                                                                                                                         |                                                              |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-8-39                                                                                                                                          | 0.19                                                         | 0.                 | 8-2-39           | Raingage R-5         |                  | 8-2-39           |                 |                  |                   |  |  |
| 7-27                                                                                                                                            | .21                                                          | 0.                 | 1:30 p           | 0.                   | 0.               | 1:42 p           | 0.              | 0                |                   |  |  |
| 7-30                                                                                                                                            | .18                                                          | 0.                 | :32              | 3.90                 | .13              | :43              | .079            | .004             |                   |  |  |
| 8-1                                                                                                                                             | .03                                                          | 0.                 | :35              | 3.40                 | .30              | :45              | .076            | .007             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :40              | 3.96                 | .63              | :46              | .105            | .008             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :44              | 2.70                 | .81              | :47              | .154            | .010             |                   |  |  |
| Watershed Conditions: Well<br>vegetated rangeland. Cover is<br>predominately blue grama, with<br>small amounts of silver sage<br>and club moss. |                                                              |                    | :47              | 6.60                 | 1.14             | :48              | .244            | .014             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :51              | 3.75                 | 1.39             | :49              | .432            | .019             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :55              | 2.70                 | 1.57             | :50              | .500            | .027             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :57              | 2.10                 | 1.64             | :51              | .635            | .037             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :59              | .30                  | 1.65             | :52              | 1.02            | .050             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | 2:03             | .30                  | 1.67             | :53              | 1.49            | .071             |                   |  |  |
|                                                                                                                                                 |                                                              |                    | :10e             | .09                  | 1.68             | :54              | 1.28            | .094             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :55              | 1.41            | .117             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :56              | 1.40            | .140             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :57              | 1.32            | .162             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :58              | 1.18            | .182             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | 2:00             | .950            | .218             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :02              | .741            | .246             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :04              | .593            | .267             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :06              | .454            | .285             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :08              | .326            | .298             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :10              | .281            | .308             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :13              | .177            | .319             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :17              | .110            | .329             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :21              | .073            | .335             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :25              | .046            | .339             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | :35              | .013            | .343             |                   |  |  |
|                                                                                                                                                 |                                                              |                    |                  |                      |                  | 3:25e            | 0.              | .346             |                   |  |  |
|                                                                                                                                                 | Notes: To convert runoff in in/hr to cfs, multiply by 35.896 |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

| Colorado Springs, Colorado                                                                                                          |                      |                    | Watershed W-IV   |                      |                  | (46.4)           | Area - 35.6 acres |                  |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-------------------|------------------|
| Antecedent conditions                                                                                                               |                      |                    | Rainfall         |                      |                  | Runoff           |                   |                  |
| Date                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)   | Acc.<br>(inches) |
| Event of August 13, 1945                                                                                                            |                      |                    |                  |                      |                  |                  |                   |                  |
| 7-12-45                                                                                                                             | 0.04                 | 0.                 | 8-13-45          | Raingage             | R-5              | 8-13-45          |                   |                  |
| 7-13                                                                                                                                | .54                  | .014               | 8:10 p           | 0.                   | 0.               | 8:17 p           | 0.009             | 0.               |
| 7-14                                                                                                                                | .03                  | 0.                 | :14              | .90                  | .06              | :20              | .035              | .001             |
| 7-17                                                                                                                                | .04                  | 0.                 | :15              | 1.80                 | .09              | :21              | .112              | .002             |
| 7-18                                                                                                                                | .22                  | 0.                 | :16              | 7.80                 | .22              | :22              | .197              | .005             |
| 7-19                                                                                                                                | .58                  | .003               | :17              | 7.20                 | .34              | :23              | .197              | .008             |
| 7-20                                                                                                                                | .02                  | 0.                 | :18              | 5.40                 | .43              | :24              | .254              | .012             |
| 7-21                                                                                                                                | .55                  | .006               | :19              | 4.20                 | .50              | :25              | .303              | .016             |
| 7-23                                                                                                                                | .82                  | .016               | :20              | 10.80                | .68              | :26              | .452              | .023             |
| 7-24                                                                                                                                | .07                  | 0.                 | :21              | 6.00                 | .78              | :27              | .812              | .033             |
| 7-31                                                                                                                                | .27                  | 0.                 | :24              | 2.80                 | .92              | :28              | 1.28              | .051             |
| 8-1                                                                                                                                 | .06                  | 0.                 | :26              | 2.40                 | 1.00             | :29              | 1.60              | .075             |
| 8-2                                                                                                                                 | .04                  | 0.                 | :28              | 1.20                 | 1.04             | :30              | 1.64              | .102             |
| 8-3                                                                                                                                 | .17                  | 0.                 | :31              | .20                  | 1.05             | :31              | 1.53              | .128             |
| 8-4                                                                                                                                 | .15                  | 0.                 | :38              | .09                  | 1.06             | :32              | 1.32              | .152             |
| 8-5                                                                                                                                 | .54                  | .004               | :40e             | .30                  | 1.07             | :33              | 1.18              | .173             |
| 8-6                                                                                                                                 | .40                  | .001               |                  |                      |                  | :34              | 1.06              | .191             |
| 8-7                                                                                                                                 | .04                  | 0.                 |                  |                      |                  | :36              | .831              | .225             |
| 8-8                                                                                                                                 | .59                  | .006               |                  |                      |                  | :38              | .664              | .249             |
| 8-9                                                                                                                                 | .12                  | 0.                 |                  |                      |                  | :40              | .566              | .269             |
| 8-11                                                                                                                                | .52                  | .005               |                  |                      |                  | :44              | .350              | .299             |
|                                                                                                                                     |                      |                    |                  |                      |                  | :48              | .249              | .319             |
|                                                                                                                                     |                      |                    |                  |                      |                  | :53              | .162              | .336             |
|                                                                                                                                     |                      |                    |                  |                      |                  | :59              | .106              | .349             |
|                                                                                                                                     |                      |                    |                  |                      |                  | 9:10             | .057              | .364             |
|                                                                                                                                     |                      |                    |                  |                      |                  | :46              | .009              | .379             |
|                                                                                                                                     |                      |                    |                  |                      |                  | 10:45e           | 0.                | .383             |
| Watershed Conditions: Well vegetated rangeland. Cover is predominately blue grama, with small amounts of silver sage and club moss. |                      |                    |                  |                      |                  |                  |                   |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 35.896                                                                        |                      |                    |                  |                      |                  |                  |                   |                  |

| Colorado Springs, Colorado                                                                                                          |                      |                    | Watershed W-IV         |                      |                  | (46.4)           |                 |                  | Area - 35.6 Acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                               |                      |                    | Rainfall               |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time       | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
|                                                                                                                                     |                      |                    | Event of July 15, 1946 |                      |                  |                  |                 |                  |                   |  |  |
| 6-17-46                                                                                                                             | 0.15                 | 0.                 | 7-15-46                | Raingage             | R-5              | 7-15-46          |                 |                  |                   |  |  |
| 6-28                                                                                                                                | .07                  | 0.                 | 6:08 p                 | 0.                   | 0.               | 6:37 p           | 0.              | 0.               |                   |  |  |
| 7-1                                                                                                                                 | .20                  | 0.                 | :11                    | .20                  | .01              | :38              | .189            | .002             |                   |  |  |
| 7-5                                                                                                                                 | .25                  | 0.                 | :14                    | 1.00                 | .06              | :39              | .274            | .006             |                   |  |  |
| 7-7                                                                                                                                 | .16                  | 0.                 | :20                    | .30                  | .09              | :40              | .144            | .009             |                   |  |  |
| 7-14                                                                                                                                | .24                  | 0.                 | :22                    | .30                  | .10              | :42              | .190            | .014             |                   |  |  |
| Watershed Conditions: Well vegetated rangeland. Cover is predominately blue grama, with small amounts of silver sage and club moss. |                      |                    | :26                    | .60                  | .14              | :43              | .238            | .018             |                   |  |  |
|                                                                                                                                     |                      |                    | :29                    | 1.00                 | .19              | :44              | .366            | .023             |                   |  |  |
|                                                                                                                                     |                      |                    | :33                    | 3.00                 | .39              | :45              | .566            | .031             |                   |  |  |
|                                                                                                                                     |                      |                    | :34                    | 4.80                 | .47              | :46              | .672            | .041             |                   |  |  |
|                                                                                                                                     |                      |                    | :37                    | 4.40                 | .69              | :47              | .829            | .054             |                   |  |  |
|                                                                                                                                     |                      |                    | :39                    | 4.20                 | .83              | :48              | .801            | .067             |                   |  |  |
|                                                                                                                                     |                      |                    | :42                    | 2.00                 | .93              | :50              | .686            | .092             |                   |  |  |
|                                                                                                                                     |                      |                    | :45                    | 1.80                 | 1.02             | :52              | .566            | .113             |                   |  |  |
|                                                                                                                                     |                      |                    | :48                    | 1.00                 | 1.07             | :54              | .460            | .130             |                   |  |  |
|                                                                                                                                     |                      |                    | :51                    | .40                  | 1.09             | :56              | .379            | .144             |                   |  |  |
|                                                                                                                                     |                      |                    | :58                    | .17                  | 1.11             | :59              | .210            | .159             |                   |  |  |
|                                                                                                                                     |                      |                    |                        |                      |                  | 7:04             | .135            | .174             |                   |  |  |
|                                                                                                                                     |                      |                    |                        |                      |                  | :10              | .071            | .183             |                   |  |  |
|                                                                                                                                     |                      |                    |                        |                      |                  | :18              | .026            | .189             |                   |  |  |
|                                                                                                                                     |                      |                    |                        |                      |                  | :35              | .005            | .193             |                   |  |  |
|                                                                                                                                     |                      |                    |                        |                      |                  | :49              | 0.              | .194             |                   |  |  |

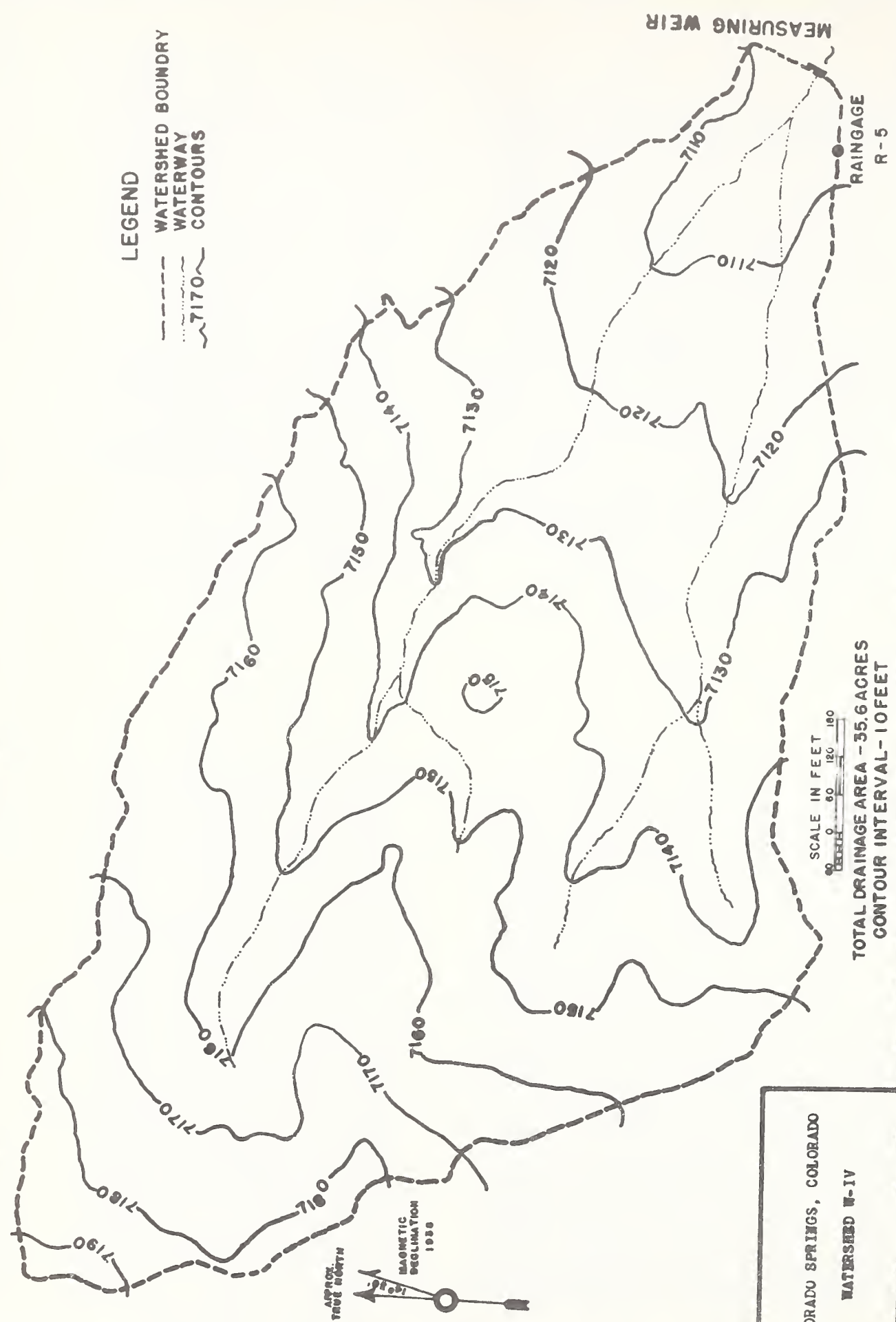
Notes: To convert runoff in in/hr to cfs, multiply by 35.896





LEGEND

- WATERSHED BOUNDARY
- WATERWAY
- ~170~ CONTOURS



COLORADO SPRINGS, COLORADO  
WATERSHED W-IV

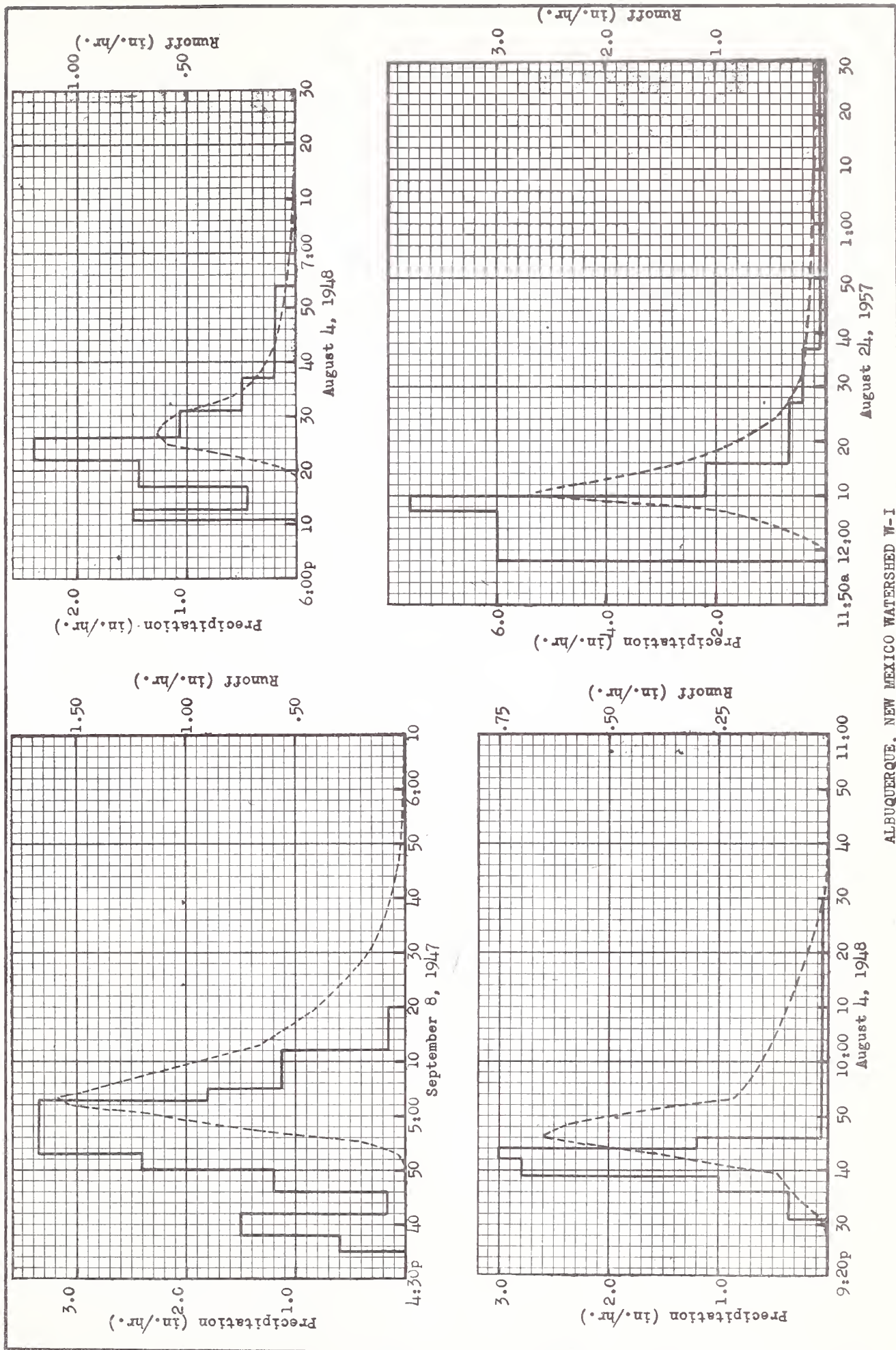
TOTAL DRAINAGE AREA - 35.6 ACRES  
CONTOUR INTERVAL - 10 FEET

SCALE IN FEET  
0 40 80 120 160 180

APPROX.  
TRUE NORTH  
MAGNETIC  
DECLINATION  
1956

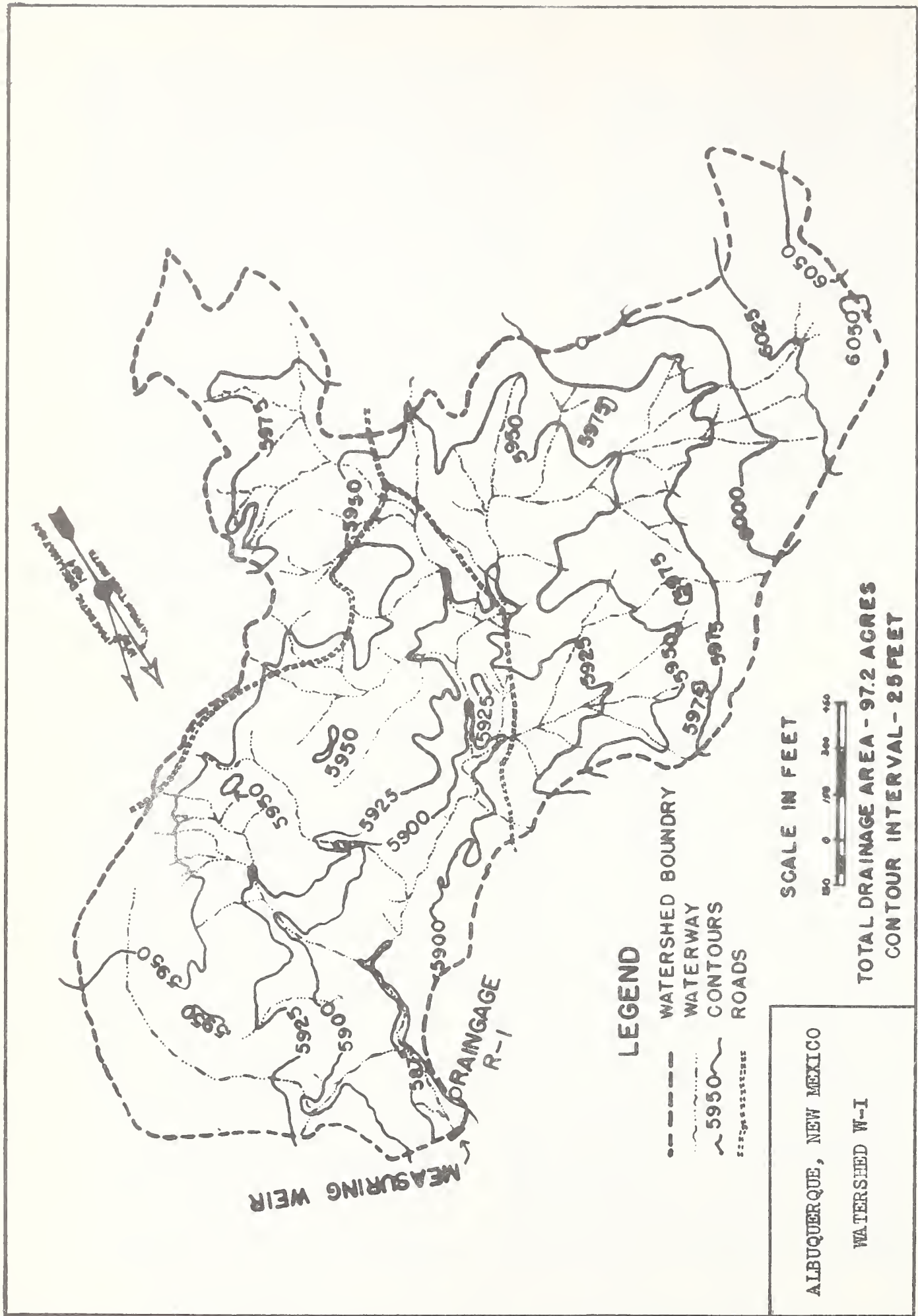
| Albuquerque, New Mexico                                                                                                                                                                         |                      |                    | Watershed W-I    |                      |                  | (47.1)           |                 |                  | Area - 97.2 acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                           |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                            | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| <u>Event of September 8, 1947</u>                                                                                                                                                               |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 8-8-47                                                                                                                                                                                          | 0.27                 | 0.006              | 9-8-47           | Raingage R-1         |                  | 9-8-47           |                 |                  |                   |  |  |
| 8-12                                                                                                                                                                                            | .55                  | .041               | 4:35 p           | 0.                   | 0.               | 4:48 p           | 0.              | 0.               |                   |  |  |
| 8-15                                                                                                                                                                                            | .11                  | 0.                 | :38              | .60                  | .03              | :53              | .041            | .001             |                   |  |  |
| 8-16                                                                                                                                                                                            | .17                  | 0.                 | :42              | 1.50                 | .13              | :54              | .095            | .002             |                   |  |  |
| 8-18                                                                                                                                                                                            | .09                  | 0.                 | :46              | .15                  | .14              | :55              | .198            | .005             |                   |  |  |
| 8-19                                                                                                                                                                                            | .21                  | .006               | :50              | 1.20                 | .22              | :59              | .984            | .042             |                   |  |  |
| 8-22                                                                                                                                                                                            | .11                  | 0.                 | :53              | 2.40                 | .34              | 5:00             | 1.14            | .060             |                   |  |  |
| 9-4                                                                                                                                                                                             | 1.00                 | .250               | 5:03             | 3.36                 | .90              | :01              | 1.34            | .081             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :05              | 1.80                 | .96              | :03              | 1.58            | .130             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :12              | 1.11                 | 1.09             | :04              | 1.48            | .155             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :20e             | .14                  | 1.11             | :05              | 1.42            | .180             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :09              | 1.04            | .264             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :13              | .668            | .319             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :15              | .615            | .341             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :19              | .448            | .377             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :27              | .237            | .422             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :35              | .110            | .442             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :45              | .039            | .453             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | 6:00             | .010            | .459             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :53e             | 0.              | .461             |                   |  |  |
| <u>Event of August 4, 1948</u>                                                                                                                                                                  |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-18-48                                                                                                                                                                                         | 0.04                 | 0.                 | 8-4-48           | Raingage R-1         |                  | 8-4-48           |                 |                  |                   |  |  |
| 7-20                                                                                                                                                                                            | .26                  | 0.                 | 6:11 p           | 0.                   | 0.               | 6:19 p           | 0.              | 0.               |                   |  |  |
| 7-23                                                                                                                                                                                            | .14                  | 0.                 | :13              | 1.50                 | .05              | :20              | .064            | .001             |                   |  |  |
| 8-3                                                                                                                                                                                             | .12                  | 0.                 | :17              | .45                  | .07              | :24              | .497            | .017             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :22              | 1.44                 | .15              | :25              | .523            | .026             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :26              | 2.40                 | .30              | :27              | .636            | .047             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :31              | 1.08                 | .41              | :28              | .622            | .057             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :37              | .50                  | .47              | :31              | .524            | .086             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :54e             | .20                  | .51              | :33              | .349            | .100             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :38              | .171            | .120             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :43              | .108            | .131             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :58              | .042            | .149             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | 7:13             | .011            | .156             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :28              | .0027           | .156             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :58e             | 0.              | .158             |                   |  |  |
| Watershed Conditions: Rough broken range land. About 85% of area is bare. Sparse vegetation consists of short grasses (blue and black grama), shrubs, and a few small juniper and pinion trees. |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 98.039                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |

| Albuquerque, New Mexico                                                                                                                                                                         |                      |                    | Watershed W-I    |                      |                  | (47.1)           |                 |                  | Area - 97.2 Acres |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                           |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                            | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
| Event of August 4, 1948                                                                                                                                                                         |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-18-48                                                                                                                                                                                         | 0.04                 | 0.                 | 8-4-48           | Raingage R-1         |                  | 8-4-48           |                 |                  |                   |  |  |
| 7-20                                                                                                                                                                                            | .26                  | 0.                 | 9:31 p           | 0.                   | 0.               | 9:28 p           | 0.              | 0.               |                   |  |  |
| 7-23                                                                                                                                                                                            | .14                  | 0.                 | :36              | .36                  | .03              | :32              | .023            | .001             |                   |  |  |
| 8-3                                                                                                                                                                                             | .12                  | 0.                 | :39              | 1.00                 | .08              | :34              | .064            | .002             |                   |  |  |
| 8-4                                                                                                                                                                                             | .51                  | .158               | :42              | 2.80                 | .22              | :39              | .120            | .010             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :44              | 3.00                 | .32              | :43              | .402            | .027             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :46              | 1.20                 | .36              | :46              | .652            | .054             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | 10:30            | .06                  | .40              | :48              | .608            | .075             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | :55e             | .07                  | .43              | :53              | .222            | .109             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :58              | .164            | .125             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | 10:13            | .076            | .155             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :28              | .014            | .166             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :44              | .004            | .169             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | 11:13e           | 0.              | .169             |                   |  |  |
| Event of August 24, 1957                                                                                                                                                                        |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| 7-21-57                                                                                                                                                                                         | 0.11                 | 0.                 | 8-24-57          | Raingage R-1         |                  | 8-24-57          |                 |                  |                   |  |  |
| 7-25                                                                                                                                                                                            | .20                  | 0.                 | 11:58 a          | 0.                   | 0.               | 12:00 N          | .003            | 0.               |                   |  |  |
| 7-26                                                                                                                                                                                            | .18                  | 0.                 | 12:07 p          | 6.00                 | .90              | :01 p            | .065            | .001             |                   |  |  |
| 8-1                                                                                                                                                                                             | .18                  | 0.                 | :10              | 7.60                 | 1.28             | :07              | .900            | .054             |                   |  |  |
| 8-6                                                                                                                                                                                             | .05                  | 0.                 | :16              | 2.20                 | 1.50             | :08              | 1.28            | .090             |                   |  |  |
| 8-9                                                                                                                                                                                             | .82                  | .106               | :27              | .65                  | 1.62             | :10              | 2.71            | .155             |                   |  |  |
| 8-16                                                                                                                                                                                            | .12                  | .044               | :37              | .42                  | 1.69             | :12              | 2.32            | .240             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    | 1:37e            | .09                  | 1.78             | :15              | 1.51            | .332             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :19              | .924            | .412             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :24              | .499            | .465             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :25              | .413            | .472             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :28              | .312            | .491             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :33              | .203            | .512             |                   |  |  |
|                                                                                                                                                                                                 |                      |                    |                  |                      |                  | :54e             | .147            | .573             |                   |  |  |
| Watershed Conditions: Rough broken range land. About 85% of area is bare. Sparse vegetation consists of short grasses (blue and black grama), shrubs, and a few small juniper and pinion trees. |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 98.039                                                                                                                                    |                      |                    |                  |                      |                  |                  |                 |                  |                   |  |  |



ALBUQUERQUE, NEW MEXICO WATERSHED W-1





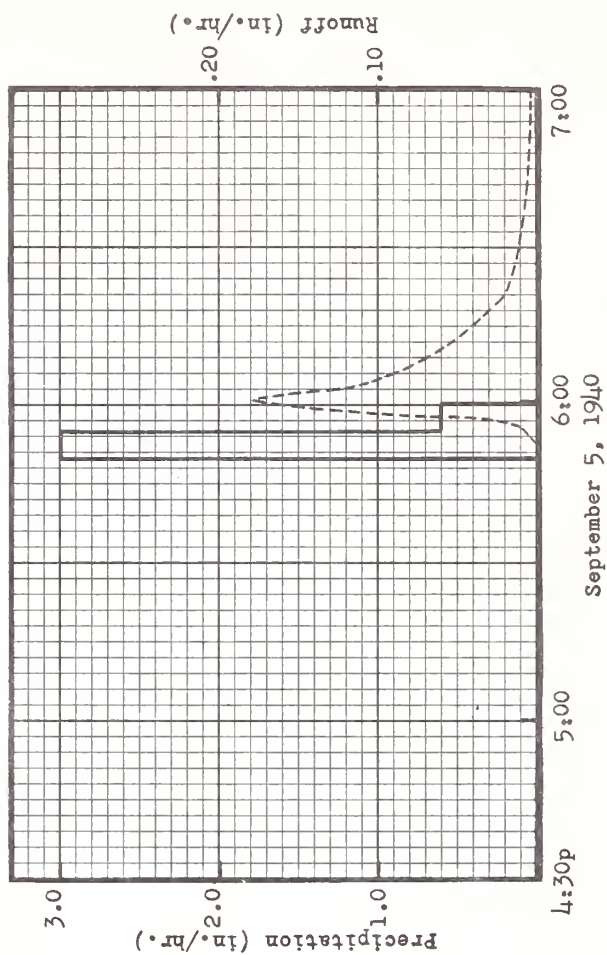
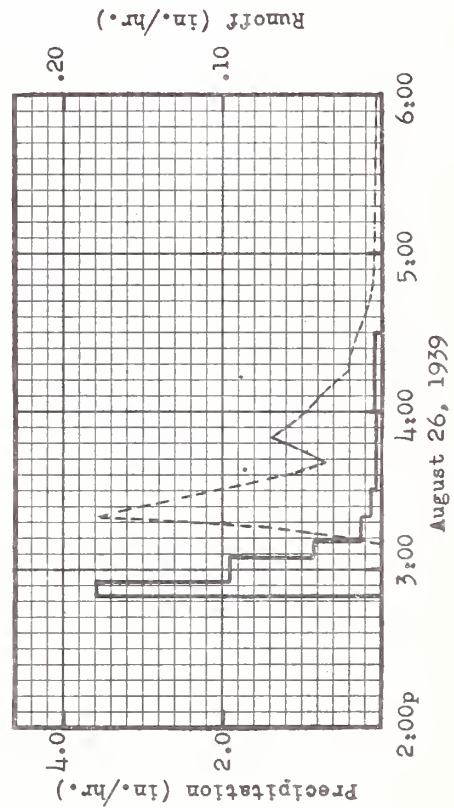
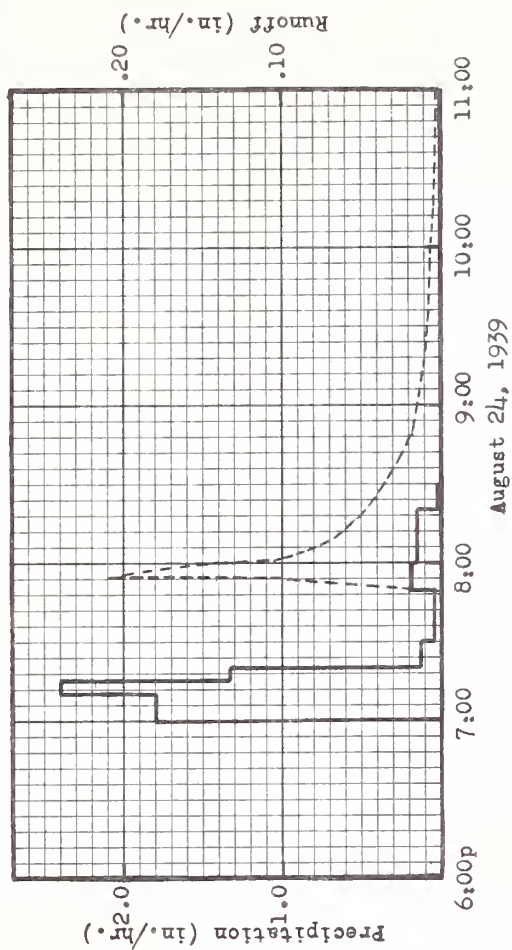
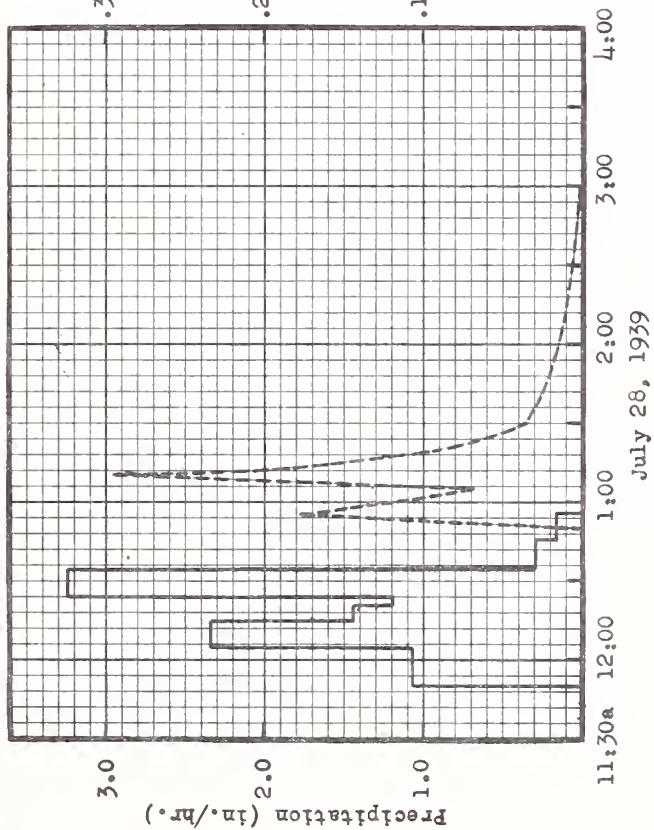
| Mexican Springs, New Mexico                                                                                                                                                          |                      |                    | Watershed W-2                   |                      |                  | (48.2)           |                 |                  | Area - 610 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                |                      |                    | Rainfall                        |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                 | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time                | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
|                                                                                                                                                                                      |                      |                    | <u>Event of July 28, 1939</u>   |                      |                  |                  |                 |                  |                  |  |  |
|                                                                                                                                                                                      | 0.                   | 0.                 | 7-28-39                         | Raingage             | 118              | 7-28-39          |                 |                  |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 11:50a                          | 0.                   | 0.               | 12:50p           | 0.              | 0.               |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 12:05                           | 1.08                 | .27              | 1:55             | .178            | .0058            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:15                            | 2.34                 | .66              | 1:00             | .123            | .0183            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:20                            | 1.44                 | .78              | 1:05             | .069            | .0263            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:25                            | 1.20                 | .88              | 1:10             | .295            | .0410            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:35                            | 3.24                 | 1.42             | 1:12             | .232            | .0498            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:45                            | .30                  | 1.47             | 1:14             | .179            | .0567            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:55e                           | .18                  | 1.50             | 1:15             | .149            | .0594            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:17             | .123            | .0640            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:19             | .097            | .0676            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:22             | .075            | .0719            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:30             | .036            | .0791            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:40             | .025            | .0842            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 2:00             | .013            | .0901            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:30             | .005            | .0946            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 3:00             | .001            | .0963            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:45e            | 0.              | .0967            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | <u>Event of August 24, 1939</u> |                      |                  |                  |                 |                  |                  |  |  |
| 7-28-39                                                                                                                                                                              | 1.50                 | .097               | 8-24-39                         | Raingage             | R-168            | 8-24-39          |                 |                  |                  |  |  |
| 7-29                                                                                                                                                                                 | .57                  | .043               | 7:00p                           | 0.                   | 0.               | 7:50p            | 0.              | 0.               |                  |  |  |
| 8-23                                                                                                                                                                                 | .29                  | .003               | 1:10                            | 1.80                 | .30              | 1:53             | .097            | .0020            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:15                            | 2.40                 | .50              | 1:55             | .209            | .0071            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:20                            | 1.32                 | .61              | 1:57             | .179            | .0136            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:30                            | .12                  | .63              | 8:00             | .135            | .0215            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:50                            | .03                  | .64              | 1:02             | .109            | .0256            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 8:00                            | .18                  | .67              | 1:04             | .090            | .0289            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:20                            | .15                  | .72              | 1:08             | .072            | .0344            |                  |  |  |
|                                                                                                                                                                                      |                      |                    | 1:30e                           | 0.                   | .72              | 1:20             | .049            | .0461            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:30             | .036            | .0532            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:40             | .025            | .0583            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:50             | .018            | .0619            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 9:10             | .012            | .0669            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:30             | .008            | .0704            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 10:00            | .005            | .0735            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 1:15             | .003            | .0746            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 11:00            | .001            | .0764            |                  |  |  |
|                                                                                                                                                                                      |                      |                    |                                 |                      |                  | 12:00e           | 0.              | .0773            |                  |  |  |
| WATERSHED CONDITIONS: About 80% of area is bare. Vegetation consists of pinon and juniper, with sparsely scattered understory of short grasses (blue grama and western wheat grass). |                      |                    |                                 |                      |                  |                  |                 |                  |                  |  |  |
| Notes: To convert runoff in in/hr to cfs, multiply by 615.                                                                                                                           |                      |                    |                                 |                      |                  |                  |                 |                  |                  |  |  |

| Antecedent conditions             |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-----------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of August 26, 1939</u>   |                      |                    |                  |                      |                  |                  |                 |                  |
| 7-28-39                           | 0.42                 | 0.09               | 8-26-39          | Raingage             | R-121            | 8-26-39          |                 |                  |
| 7-29                              | .37                  | .04                | 2:50p            | 0.                   | 0.               | 3:10p            | 0.              | 0.               |
| 8-23                              | .29                  | .003               | 1:55             | 3.60                 | .30              | 1:12             | .015            | .0002            |
| 8-24                              | .09                  | .07                | 3:05             | 1.92                 | .62              | 1:14             | .045            | .0011            |
|                                   |                      |                    | 1:10             | .84                  | .69              | 1:16             | .085            | .0033            |
|                                   |                      |                    | 1:20             | .24                  | .73              | 1:18             | .135            | .0070            |
|                                   |                      |                    | 1:30             | .12                  | .75              | 1:20             | .179            | .0123            |
|                                   |                      |                    | 4:00             | .04                  | .77              | 1:24             | .144            | .0230            |
|                                   |                      |                    | 1:30e            | .06                  | .80              | 1:28             | .112            | .0315            |
|                                   |                      |                    |                  |                      |                  | 1:32             | .083            | .0380            |
|                                   |                      |                    |                  |                      |                  | 1:36             | .058            | .0427            |
|                                   |                      |                    |                  |                      |                  | 1:40             | .036            | .0458            |
|                                   |                      |                    |                  |                      |                  | 1:44             | .048            | .0487            |
|                                   |                      |                    |                  |                      |                  | 1:48             | .061            | .0523            |
|                                   |                      |                    |                  |                      |                  | 1:50             | .069            | .0545            |
|                                   |                      |                    |                  |                      |                  | 1:52             | .065            | .0567            |
|                                   |                      |                    |                  |                      |                  | 1:56             | .057            | .0608            |
|                                   |                      |                    |                  |                      |                  | 4:00             | .049            | .0643            |
|                                   |                      |                    |                  |                      |                  | 1:05             | .040            | .0680            |
|                                   |                      |                    |                  |                      |                  | 1:15             | .021            | .0731            |
|                                   |                      |                    |                  |                      |                  | 1:20             | .021            | .0749            |
|                                   |                      |                    |                  |                      |                  | 1:30             | .015            | .0779            |
|                                   |                      |                    |                  |                      |                  | 1:40             | .009            | .0799            |
|                                   |                      |                    |                  |                      |                  | 1:50             | .007            | .0814            |
|                                   |                      |                    |                  |                      |                  | 5:00             | .006            | .0826            |
|                                   |                      |                    |                  |                      |                  | 1:10             | .005            | .0836            |
|                                   |                      |                    |                  |                      |                  | 1:30             | .004            | .0852            |
|                                   |                      |                    |                  |                      |                  | 6:00             | .003            | .0870            |
|                                   |                      |                    |                  |                      |                  | 7:00             | .001            | .0891            |
|                                   |                      |                    |                  |                      |                  | 8:00             | .0001           | .0895            |
|                                   |                      |                    |                  |                      |                  | 1:30e            | 0.              | .0896            |
| <u>Event of September 5, 1940</u> |                      |                    |                  |                      |                  |                  |                 |                  |
| 7-28-40                           | 0.76                 | 0.                 | 9-5-40           | Raingage             | R-121            | 9-5-40           |                 |                  |
| 8-19                              | .22                  | .004               | 5:50p            | 0.                   | 0.               | 5:52p            | 0.              | 0.               |
| 8-20                              | .24                  | .001               | 1:55             | 3.00                 | .25              | 1:54             | .004            | .0001            |
| 8-23                              | .21                  | .017               | 6:00e            | .60                  | .30              | 1:56             | .010            | .0003            |
| 8-24                              | .13                  | 0.                 |                  |                      |                  | 1:58             | .064            | .0013            |
| 8-25                              | .30                  | .019               |                  |                      |                  | 6:00             | .164            | .0052            |
|                                   |                      |                    |                  |                      |                  | 1:01             | .179            | .0081            |
|                                   |                      |                    |                  |                      |                  | 1:02             | .157            | .0109            |
|                                   |                      |                    |                  |                      |                  | 1:03             | .123            | .0132            |
|                                   |                      |                    |                  |                      |                  | 1:21             | .020            | .0281            |
|                                   |                      |                    |                  |                      |                  | 1:25             | .016            | .0293            |
|                                   |                      |                    |                  |                      |                  | 1:30             | .012            | .0304            |
|                                   |                      |                    |                  |                      |                  | 1:40             | .007            | .0319            |
|                                   |                      |                    |                  |                      |                  | 1:50             | .005            | .0329            |
|                                   |                      |                    |                  |                      |                  | 7:00             | .004            | .0337            |
|                                   |                      |                    |                  |                      |                  | 11:00e           | 0.              | .0373            |

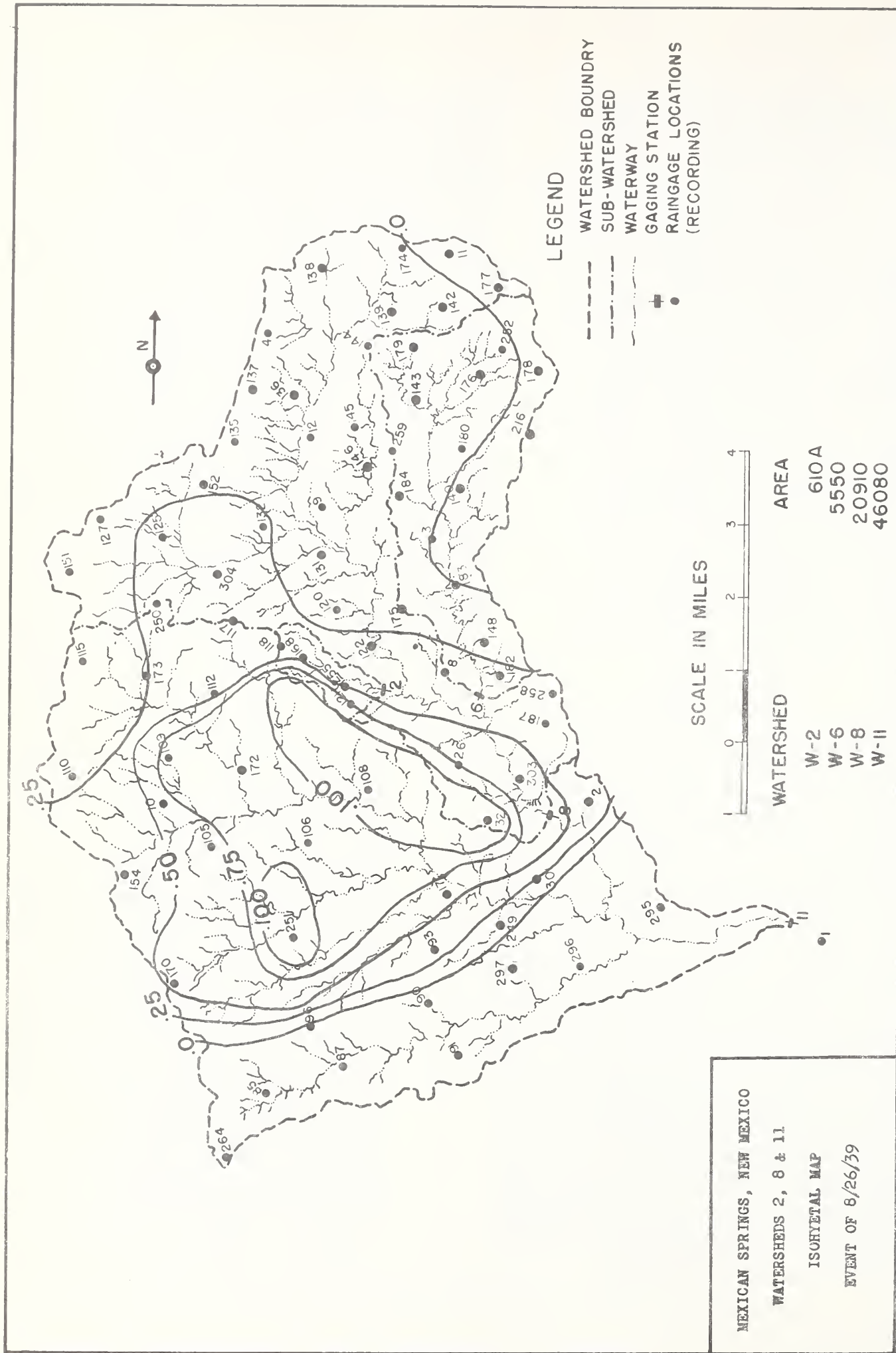
WATERSHED CONDITIONS: About 80% of area is bare. Vegetation consists of pinon and juniper, with sparsely scattered understory of short grasses (blue grama and western wheat grass).

Notes: To convert runoff in in/hr to cfs, multiply by 615.









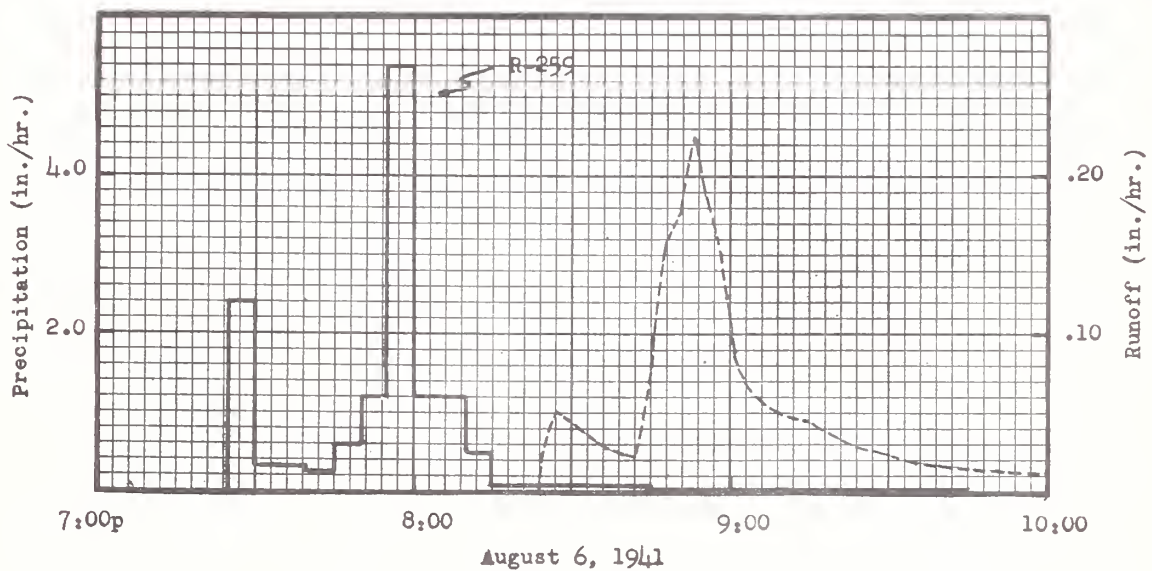
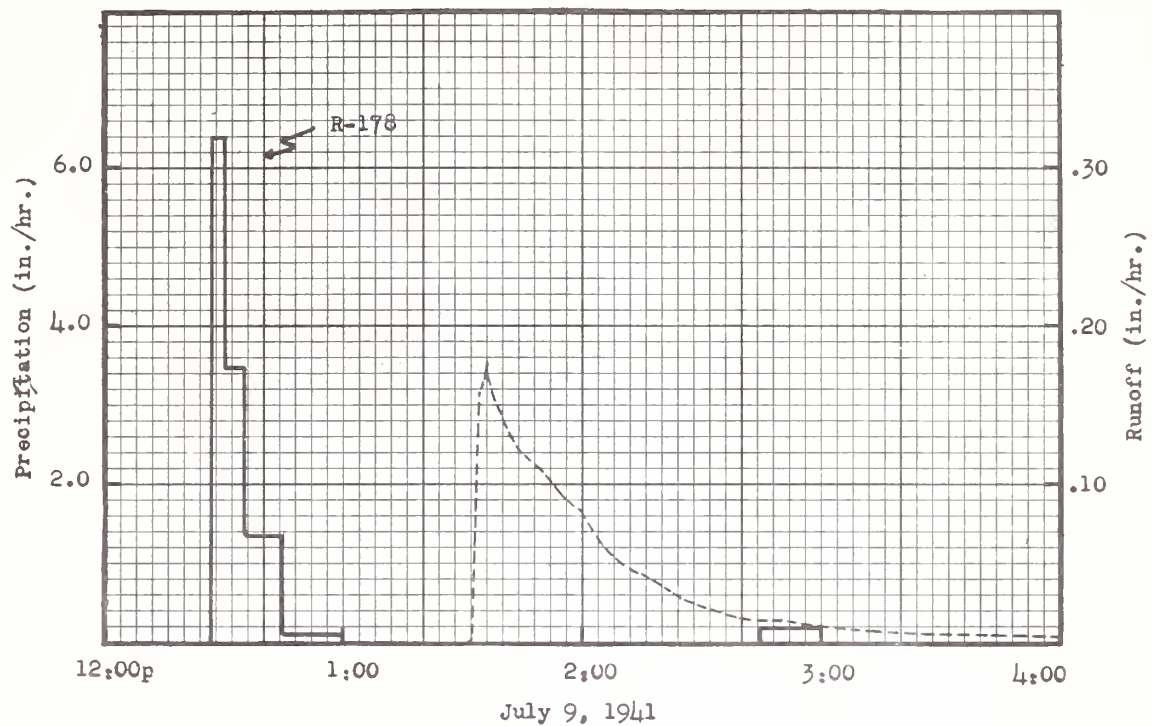
| Mexican Springs, New Mexico                                                                                                                                                                                        |                      |                    | Watershed W-6                |                      |                  | (48.4)           |                 |                  | Area = 5550 Acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------------|----------------------|------------------|------------------|-----------------|------------------|-------------------|--|--|
| Antecedent conditions                                                                                                                                                                                              |                      |                    | Rainfall                     |                      |                  | Runoff           |                 |                  |                   |  |  |
| Date                                                                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time             | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    | <u>Event of July 9, 1941</u> |                      |                  |                  |                 |                  |                   |  |  |
| Raingage R-178                                                                                                                                                                                                     |                      |                    | Raingage R-178               |                      |                  |                  |                 |                  |                   |  |  |
| 6-8-41                                                                                                                                                                                                             | 0.05                 | 0.003              | 7-9-41                       |                      |                  | 7-9-41           |                 |                  |                   |  |  |
| 6-9                                                                                                                                                                                                                | .03                  | 0                  | 12:27 p                      | 0.                   | 0.08             | 1:31 p           | 0.              | 0.               |                   |  |  |
| 6-11                                                                                                                                                                                                               | .04                  | 0                  | 1:30                         | 6.40                 | .40              | 1:32             | .0039           | .0001            |                   |  |  |
| 6-15                                                                                                                                                                                                               | .01                  | 0                  | 1:35                         | 3.48                 | .69              | 1:34             | .157            | .0029            |                   |  |  |
| 6-23                                                                                                                                                                                                               | .03                  | 0                  | 1:45                         | 1.38                 | .92              | 1:35             | .163            | .0055            |                   |  |  |
| 7-4                                                                                                                                                                                                                | .10                  | 0                  | 1:00                         | .12                  | .95              | 1:36             | .176            | .0083            |                   |  |  |
| Raingage R-143                                                                                                                                                                                                     |                      |                    | 2:45                         | 0.                   | .95              | 1:37             | .163            | .0112            |                   |  |  |
| 6-8-41                                                                                                                                                                                                             | 0.11                 |                    | 3:00 e                       | .20                  | 1.00             | 1:40             | .147            | .0189            |                   |  |  |
| 6-11                                                                                                                                                                                                               | .02                  |                    | 7-9-41                       |                      |                  | 1:45             | .121            | .0301            |                   |  |  |
| 6-23                                                                                                                                                                                                               | .03                  |                    | 12:10 p                      | 0.                   | 0.               | 1:50             | .109            | .0397            |                   |  |  |
| 7-4                                                                                                                                                                                                                | .05                  |                    |                              |                      |                  |                  |                 |                  |                   |  |  |
| 7-5                                                                                                                                                                                                                | .11                  |                    | 1:15                         | 4.80                 | .40              | 1:55             | .0902           | .0480            |                   |  |  |
| <p>WATERSHED CONDITIONS: 80 to 90% of area is bare. Vegetation consists of pinon and juniper with scattered shrubs (mountain mahogany and serviceberry) and scattered ponderosa pine in upper portion of area.</p> |                      |                    | 1:30                         | 1.68                 | .82              | 2:00             | .0831           | .0552            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    | 1:00                         | .04                  | .84              | 1:05             | .0617           | .0613            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    | 1:15 e                       | .24                  | .90              | 1:10             | .0500           | .0659            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:15             | .0438           | .0698            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:20             | .0361           | .0732            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:25             | .0288           | .0759            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:35             | .0200           | .0798            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:50             | .0141           | .0841            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 3:15             | .0075           | .0884            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 1:30             | .0055           | .0900            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 4:30             | .0021           | .0936            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 5:30             | .0011           | .0951            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 6:30             | .0006           | .0959            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 7:00             | .0005           | .0962            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 8:00             | .0003           | .0967            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 9:00             | .0001           | .0968            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 10:00            | .0001           | .0969            |                   |  |  |
|                                                                                                                                                                                                                    |                      |                    |                              |                      |                  | 12:00mt          | 0.              | .0970            |                   |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 5596.

| Antecedent conditions   |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |
|-------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|
| Date                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of August 6, 1941 |                      |                    |                  |                      |                  |                  |                 |                  |
| Rainage R-259           |                      |                    | Rainage R-259    |                      |                  | Rainage R-259    |                 |                  |
| 7-9-41                  | 0.53                 | 0.097              | 8-6-41           |                      |                  | 8-6-41           |                 |                  |
| 7-18                    | .02                  | 0                  | 7:25p            | 0.                   | 0.               | 8:24p            | 0.              | 0.               |
| 7-19                    | .09                  | .035               | 8:30             | 2.40                 | .20              | 8:25             | .0300           | .0002            |
| 7-23                    | .68                  | .025               | 8:40             | .36                  | .26              | 8:27             | .0500           | .0016            |
| 8-6                     | .52                  | .023               | 8:45             | .24                  | .28              | 8:30             | .0438           | .0040            |
|                         |                      |                    | 8:50             | .60                  | .33              | 8:33             | .0357           | .0060            |
|                         |                      |                    | 8:55             | 1.20                 | .43              | 8:37             | .0291           | .0081            |
|                         |                      |                    | 8:00             | 5.40                 | .88              | 8:40             | .0234           | .0094            |
|                         |                      |                    | 8:10             | 1.20                 | 1.08             | 8:42             | .0225           | .0102            |
|                         |                      |                    | 8:15             | .48                  | 1.12             | 8:45             | .0733           | .0122            |
|                         |                      |                    | 8:45             | .04                  | 1.14             | 8:47             | .147            | .0161            |
|                         |                      |                    | 9:45             | .02                  | 1.16             | 8:48             | .160            | .0186            |
| Rainage R-216           |                      |                    | Rainage R-216    |                      |                  | Rainage R-216    |                 |                  |
| 7-9-41                  | 0.48                 |                    | 8-6-41           |                      |                  | 8:50             | .176            | .0242            |
| 7-11                    | .02                  |                    | 6:30p            | 0.                   | 0.               | 8:52             | .209            | .0307            |
| 7-17                    | .07                  |                    | 6:35             | 1.68                 | .14              | 8:53             | .223            | .0343            |
| 7-18                    | .02                  |                    | 6:40             | 1.32                 | .25              | 8:55             | .188            | .0411            |
| 7-19                    | .06                  |                    | 6:45             | 1.80                 | .40              | 8:57             | .163            | .0470            |
|                         |                      |                    |                  |                      |                  | 8:59             | .121            | .0516            |
| 7-23                    | .02                  |                    | 6:50             | 4.20                 | .75              | 9:01             | .0894           | .0550            |
|                         |                      |                    | 6:55             | 6.36                 | 1.28             | 9:04             | .0638           | .0587            |
|                         |                      |                    | 7:00             | .48                  | 1.32             |                  |                 |                  |
|                         |                      |                    | 7:15             | .16                  | 1.36             | 9:06             | .0568           | .0607            |
|                         |                      |                    | 7:30             | .16                  | 1.40             | 9:10             | .0493           | .0643            |
|                         |                      |                    |                  |                      |                  | 9:15             | .0420           | .0681            |
|                         |                      |                    |                  |                      |                  | 9:20             | .0347           | .0713            |
|                         |                      |                    |                  |                      |                  | 9:25             | .0279           | .0739            |
|                         |                      |                    |                  |                      |                  | 9:30             | .0222           | .0760            |
|                         |                      |                    |                  |                      |                  | 9:35             | .0191           | .0777            |
|                         |                      |                    |                  |                      |                  | 9:40             | .0168           | .0792            |
|                         |                      |                    |                  |                      |                  | 9:50             | .0130           | .0816            |
|                         |                      |                    |                  |                      |                  | 10:00            | .0112           | .0837            |
|                         |                      |                    |                  |                      |                  | 10:15            | .0095           | .0863            |
|                         |                      |                    |                  |                      |                  | 10:30            | .0070           | .0883            |
|                         |                      |                    |                  |                      |                  | 11:00            | .0044           | .0911            |
|                         |                      |                    |                  |                      |                  | 11:30            | .0033           | .0930            |
|                         |                      |                    |                  |                      |                  | 12:00mt          | .0026           | .0945            |
|                         |                      |                    |                  |                      |                  | 8-7-41           |                 |                  |
|                         |                      |                    |                  |                      |                  | 7:00a            | 0.              | .0985            |

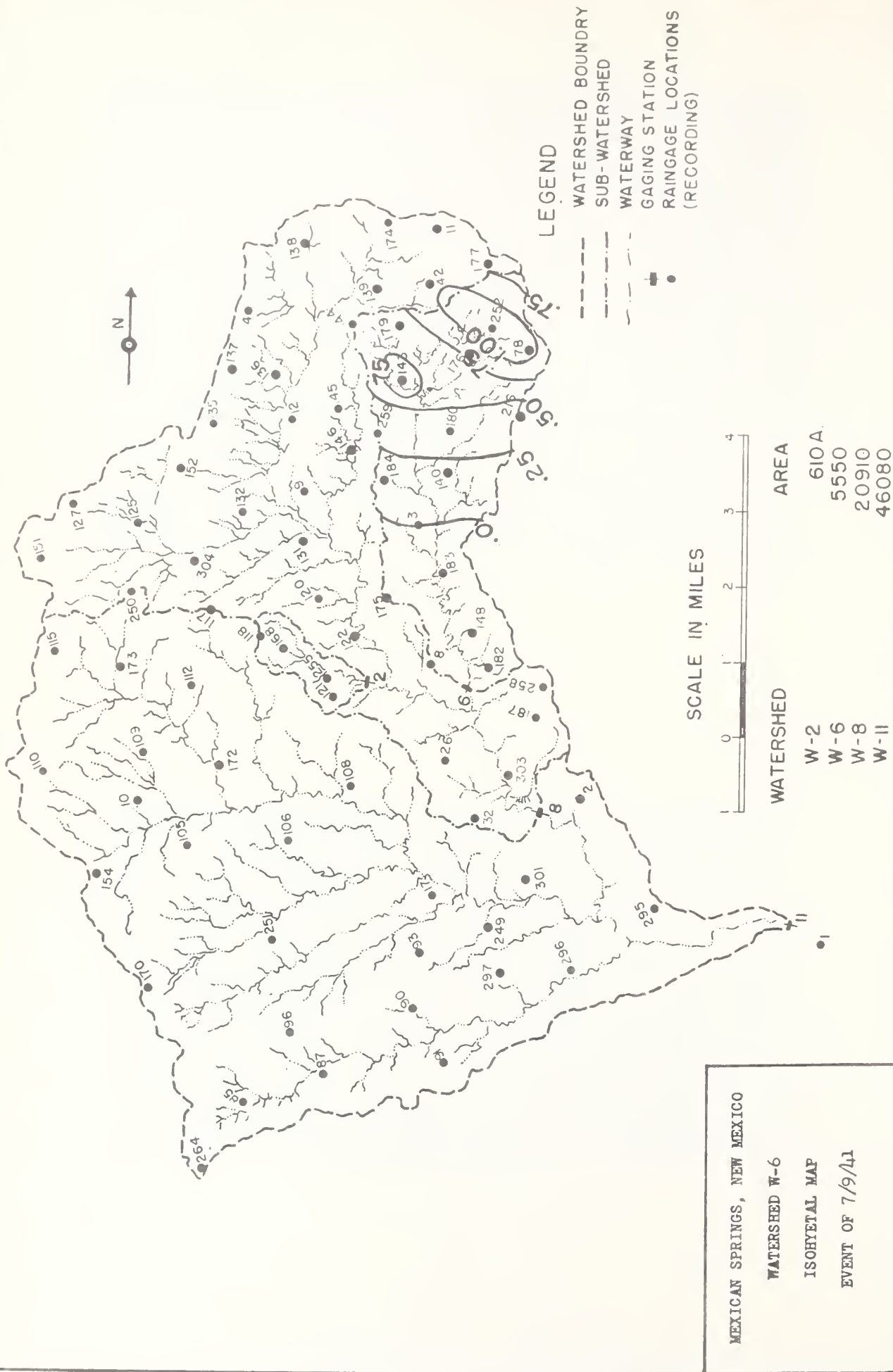
WATERSHED CONDITIONS: 80 to 90% of area is bare. Vegetation consists of pinon and juniper with scattered shrubs (mountain mahogany and sericea-berry) and scattered ponderosa pine in upper portion of area.

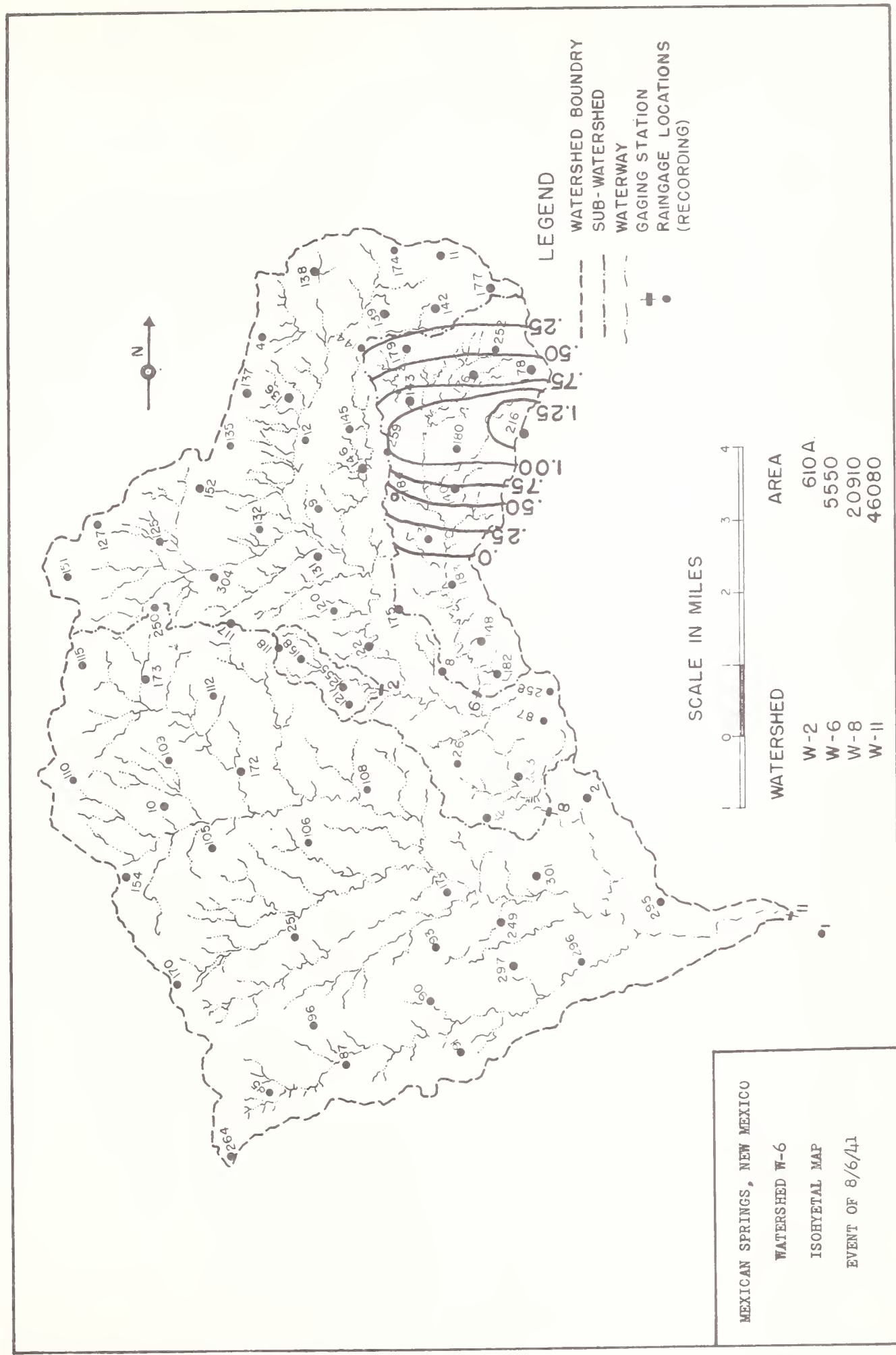
Notes: To convert runoff in in/hr to cfs, multiply by 5596.



MEXICAN SPRINGS, NEW MEXICO WATERSHED W-6









| Mexican Springs, New Mexico                                                                                                                                                                                                                                                                                |                      |                    | Watershed W-8            |                      |                  | (48.6)           |                 | Area = 20,910    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------|----------------------|------------------|------------------|-----------------|------------------|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                      |                      |                    | Rainfall                 |                      |                  | Runoff           |                 |                  |  |
| Date                                                                                                                                                                                                                                                                                                       | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time         | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | Event of August 26, 1939 |                      |                  |                  |                 |                  |  |
| 7-28-39                                                                                                                                                                                                                                                                                                    | 0.42                 | 0.09               | 8-26-39                  | Raingage R-121       |                  | 8-26-39          |                 |                  |  |
| 7-29                                                                                                                                                                                                                                                                                                       | .37                  | .04                | 2:50p                    | 0.                   | 0.               | 3:45p            | 0.              | 0.               |  |
| 8-23                                                                                                                                                                                                                                                                                                       | .29                  | .003               | 1:55                     | 3.60                 | .30              | 1:55             | .0003           | .0001            |  |
| 8-24                                                                                                                                                                                                                                                                                                       | .09                  | .07                | 3:05                     | 1.92                 | .62              | 4:00             | .0005           | .0001            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:10                     | .84                  | .69              | 1:05             | .003            | .0002            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:20                     | .24                  | .73              | 1:10             | .002            | .0004            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:30                     | .12                  | .75              | 1:20             | .010            | .0015            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 4:00                     | .04                  | .77              | 1:30             | .020            | .0039            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:30 e                   | .06                  | .80              | 1:35             | .038            | .0063            |  |
| WATERSHED CONDITIONS: 80% of area is bare. Vegetation consists predominately of pinon and juniper with scattered shrubs (mountain mahogany and serviceberry), and sparsely scattered understory of short grasses (blue grama, galleta, and western wheatgrass). Scattered ponderosa pine on upper portion. |                      |                    |                          |                      |                  | 1:40             | .026            | .0090            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:45             | .016            | .0108            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:50             | .011            | .0119            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:55             | .009            | .0127            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 5:00             | .007            | .0134            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:15             | .005            | .0148            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:30             | .004            | .0159            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:45             | .003            | .0167            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 6:00             | .002            | .0173            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:15             | .002            | .0178            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 1:30             | .001            | .0182            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 7:30             | .0009           | .0195            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 8:00             | .0008           | .0199            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 9:00             | .0006           | .0206            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                          |                      |                  | 10:00            | .0005           | .0212            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 11:00                    | .0004                | .0216            |                  |                 |                  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 12:00mt                  | .0003                | .0220            |                  |                 |                  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 8-27-39                  |                      |                  |                  |                 |                  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 2:00a e                  |                      |                  | 0.               | .0238           |                  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 21,084.  
See 48.2, Sheet 4 for isohyetal map of this event.

Notes: To convert runoff in in/hr to cfs, multiply by 21,084.  
See 48.2, Sheet 4 for isohyetal map of this event.

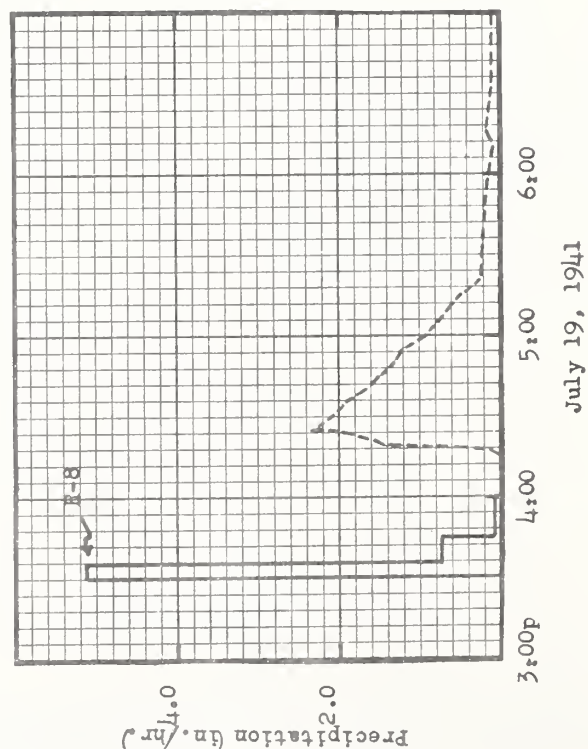
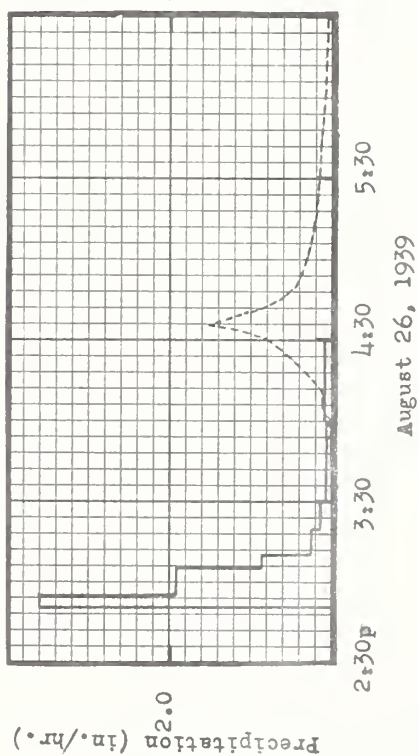


| Mexican Springs, New Mexico                                                                                                                                                                                                                                                                                |                      |                    | Watershed W-8    |                       |                  | (48.6)           |                 | Area - 20,910    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|-----------------------|------------------|------------------|-----------------|------------------|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                      |                      |                    | Rainfall         |                       |                  | Runoff           |                 |                  |  |
| Date                                                                                                                                                                                                                                                                                                       | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |  |
| Event of July 19, 1941                                                                                                                                                                                                                                                                                     |                      |                    |                  |                       |                  |                  |                 |                  |  |
| Raingage R-8                                                                                                                                                                                                                                                                                               |                      |                    | Raingage R-8     |                       |                  | Raingage R-8     |                 |                  |  |
| 7-4-41                                                                                                                                                                                                                                                                                                     | 0.09                 | 0.                 | 7-19-41          | 0.                    | 0.               | 7-19-41          | 0.              | 0.               |  |
| 7-8                                                                                                                                                                                                                                                                                                        | .18                  | 0.                 | 3:30p            | 0.                    | 0.               | 4:15p            | 0.              | 0.               |  |
| 7-9                                                                                                                                                                                                                                                                                                        | .10                  | .0163              | 4:35             | 5.52                  | .46              | 4:17             | .0172           | .0003            |  |
| 7-14                                                                                                                                                                                                                                                                                                       | .07                  | 0.                 | 4:50             | .72                   | .64              | 4:19             | .0353           | .0012            |  |
| 7-18                                                                                                                                                                                                                                                                                                       | .01                  | .0014              | 4:00 e           | .06                   | .65              | 4:21             | .0397           | .0025            |  |
| Raingage R-132                                                                                                                                                                                                                                                                                             |                      |                    | Raingage R-132   |                       |                  | Raingage R-132   |                 |                  |  |
| 6-23-41                                                                                                                                                                                                                                                                                                    | 0.04                 | 0.                 | 7-19-41          | 0.                    | 0.               | 4:23             | .0465           | .0039            |  |
| 7-4                                                                                                                                                                                                                                                                                                        | .04                  |                    | 3:15p            | 0.                    | 0.               | 4:25             | .0581           | .0057            |  |
| 7-5                                                                                                                                                                                                                                                                                                        | .40                  |                    | 4:19             | 4.80                  | .32              | 4:30             | .0512           | .0102            |  |
| 7-8                                                                                                                                                                                                                                                                                                        | .02                  |                    | 4:25             | 1.00                  | .42              | 4:35             | .0474           | .0143            |  |
| 7-9                                                                                                                                                                                                                                                                                                        | .13                  |                    | 4:30             | .84                   | .49              | 4:40             | .0415           | .0180            |  |
| 7-13                                                                                                                                                                                                                                                                                                       | .03                  |                    | 4:35             | .36                   | .52              | 4:45             | .0375           | .0213            |  |
| 7-14                                                                                                                                                                                                                                                                                                       | .10                  |                    | 4:45 e           | .12                   | .54              | 4:50             | .0337           | .0243            |  |
| 7-17                                                                                                                                                                                                                                                                                                       | .02                  |                    |                  |                       |                  | 4:55             | .0309           | .0270            |  |
| 7-18                                                                                                                                                                                                                                                                                                       | .05                  |                    |                  |                       |                  | 5:00             | .0231           | .0293            |  |
| 7-19                                                                                                                                                                                                                                                                                                       | .05                  |                    |                  |                       |                  | 4:05             | .0192           | .0310            |  |
| WATERSHED CONDITIONS: 80% of area is bare. Vegetation consists predominately of pinon and juniper with scattered shrubs (mountain mahogany and serviceberry), and sparsely scattered understory of short grasses (blue grama, galleta, and western wheatgrass). Scattered ponderosa pine on upper portion. |                      |                    |                  |                       |                  | 4:10             | .0153           | .0325            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:15             | .0119           | .0336            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:20             | .0078           | .0344            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:25             | .0068           | .0350            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:30             | .0061           | .0356            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:45             | .0041           | .0368            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 6:10             | .0028           | .0382            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:15             | .0041           | .0385            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:16             | .0048           | .0385            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:30             | .0038           | .0395            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 7:00             | .0025           | .0411            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 8:30             | .0009           | .0435            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 9:30             | .0005           | .0441            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 11:00            | .0003           | .0447            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 12:00mt          | .0002           | .0449            |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 7-20-41          |                 |                  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 3:00p e          | 0.              | .0457            |  |

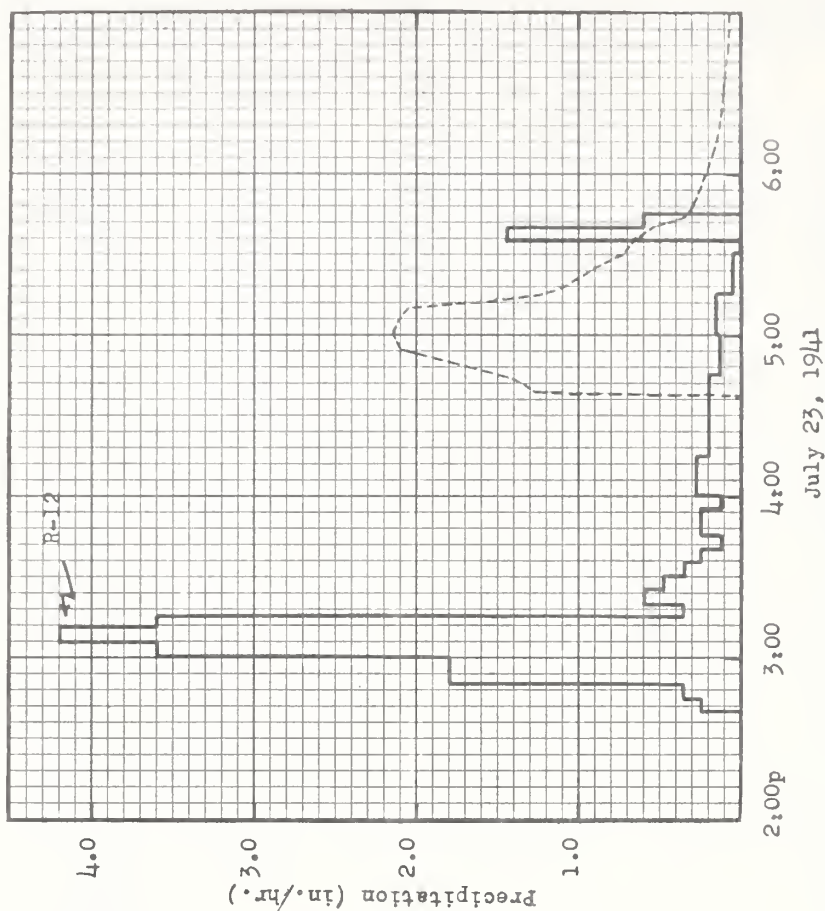
Notes: To convert runoff in in/hr to cfs, multiply by 21,084.

| Mexican Springs, New Mexico                                                                                                                                                                                                                                                                                |                      |                    | Watershed W-8          |                      |                  | (48.6)           |                 |                  | Area - 20,910 acres |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------------|----------------------|------------------|------------------|-----------------|------------------|---------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                      |                      |                    | Rainfall               |                      |                  | Runoff           |                 |                  |                     |  |  |
| Date                                                                                                                                                                                                                                                                                                       | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time       | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                     |  |  |
| Event of July 23, 1941                                                                                                                                                                                                                                                                                     |                      |                    |                        |                      |                  |                  |                 |                  |                     |  |  |
| Raingage R-12                                                                                                                                                                                                                                                                                              |                      |                    | Raingage R-12          |                      |                  | Raingage R-12    |                 |                  |                     |  |  |
| 6-23-41                                                                                                                                                                                                                                                                                                    | 0.06                 | 0.                 | 7-23-41                | 0.                   | 0.               | 7-23-41          | 0.              | 0.               |                     |  |  |
| 7-4                                                                                                                                                                                                                                                                                                        | .05                  | 0.                 | 2:40p                  |                      |                  | 4:42p            |                 |                  |                     |  |  |
| 7-5                                                                                                                                                                                                                                                                                                        | .25                  | 0.                 | 1:45                   | .24                  | .02              | 1:43             | .0033           | .0001            |                     |  |  |
| 7-8                                                                                                                                                                                                                                                                                                        | .02                  | 0.                 | 1:50                   | .36                  | .05              | 1:45             | .129            | .0022            |                     |  |  |
| 7-9                                                                                                                                                                                                                                                                                                        | .35                  | .0163              | 3:00                   | 1.80                 | .35              | 1:50             | .142            | .0135            |                     |  |  |
| 7-11                                                                                                                                                                                                                                                                                                       | .02                  | 0.                 | 1:05                   | 3.60                 | .65              | 1:55             | .206            | .0280            |                     |  |  |
| 7-18                                                                                                                                                                                                                                                                                                       | .02                  | .0014              | 1:10                   | 4.20                 | 1.00             | 5:00             | .213            | .0455            |                     |  |  |
| 7-19                                                                                                                                                                                                                                                                                                       | .19                  | .0449              | 1:15                   | 3.60                 | 1.30             | 1:10             | .206            | .0804            |                     |  |  |
| 7-22                                                                                                                                                                                                                                                                                                       | .04                  | 0.                 | 1:20                   | .36                  | 1.33             | 1:15             | .123            | .0941            |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:25                   | .60                  | 1.38             | 1:20             | .104            | .1036            |                     |  |  |
| Raingage R-125                                                                                                                                                                                                                                                                                             |                      |                    |                        |                      |                  |                  |                 |                  |                     |  |  |
| 6-23-41                                                                                                                                                                                                                                                                                                    | 0.04                 |                    | 1:30                   | .48                  | 1.42             | 1:25             | .0918           | .1118            |                     |  |  |
| 6-24                                                                                                                                                                                                                                                                                                       | .07                  |                    | 1:35                   | .36                  | 1.45             | 1:30             | .0735           | .1187            |                     |  |  |
| 7-4                                                                                                                                                                                                                                                                                                        | .11                  |                    | 1:40                   | .24                  | 1.47             | 1:35             | .0650           | .1244            |                     |  |  |
| 7-5                                                                                                                                                                                                                                                                                                        | .44                  |                    | 1:45                   | .12                  | 1.48             | 1:40             | .0539           | .1294            |                     |  |  |
| 7-8                                                                                                                                                                                                                                                                                                        | .50                  |                    | 1:55                   | .24                  | 1.52             | 1:50             | .0333           | .1363            |                     |  |  |
| 7-9                                                                                                                                                                                                                                                                                                        | .06                  |                    | 4:00                   | .12                  | 1.53             | 6:00             | .0218           | .1405            |                     |  |  |
| 7-11                                                                                                                                                                                                                                                                                                       | .02                  |                    | 1:15                   | .28                  | 1.60             | 1:10             | .0167           | .1437            |                     |  |  |
| 7-14                                                                                                                                                                                                                                                                                                       | .12                  |                    | 1:45                   | .20                  | 1.70             | 1:30             | .0109           | .1482            |                     |  |  |
| 7-15                                                                                                                                                                                                                                                                                                       | .29                  |                    | 5:00                   | .12                  | 1.73             | 1:45             | .0090           | .1507            |                     |  |  |
| 7-17                                                                                                                                                                                                                                                                                                       | .46                  |                    | 1:15                   | .16                  | 1.77             | 7:00             | .0084           | .1528            |                     |  |  |
| 7-18                                                                                                                                                                                                                                                                                                       | .05                  |                    | 1:30                   | .04                  | 1.78             | 1:30             | .0063           | .1566            |                     |  |  |
| 7-19                                                                                                                                                                                                                                                                                                       | .63                  |                    | 1:35                   | 0.                   | 1.78             | 1:45             | .0052           | .1580            |                     |  |  |
| 7-22                                                                                                                                                                                                                                                                                                       | .05                  |                    | 1:40                   | 1.44                 | 1.90             | 8:00             | .0044           | .1592            |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:45e                  | .60                  | 1.95             | 9:00             | .0026           | .1625            |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                        |                      |                  | 12:00mt          | .0009           | .1748            |                     |  |  |
| WATERSHED CONDITIONS: 80% of area is bare. Vegetation consists predominately of pinon and juniper with scattered shrubs (mountain mahogany and serviceberry), and sparsely scattered understory of short grasses (blue grama, galleta, and western wheatgrass). Scattered ponderosa pine on upper portion. |                      |                    | 7-23-41 Raingage R-125 |                      |                  | 7-24-41          |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 2:15p                  | 0.                   | 0.               | 2:20p e          | 0.              | .1830            |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:30                   | 1.00                 | .25              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:35                   | .60                  | .30              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:40                   | .24                  | .32              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:45                   | .96                  | .40              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:50                   | .84                  | .47              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:55                   | 2.76                 | .70              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 3:00                   | 3.00                 | .95              |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:05                   | 3.60                 | 1.25             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:20                   | 2.40                 | 1.85             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:25                   | 1.20                 | 1.95             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:30                   | .84                  | 2.02             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:35                   | .36                  | 2.05             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 9:45                   | 0.                   | 2.05             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 1:55                   | .60                  | 2.15             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    | 10:00 e                | .12                  | 2.16             |                  |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                            |                      |                    |                        |                      |                  |                  |                 |                  |                     |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 21,084.

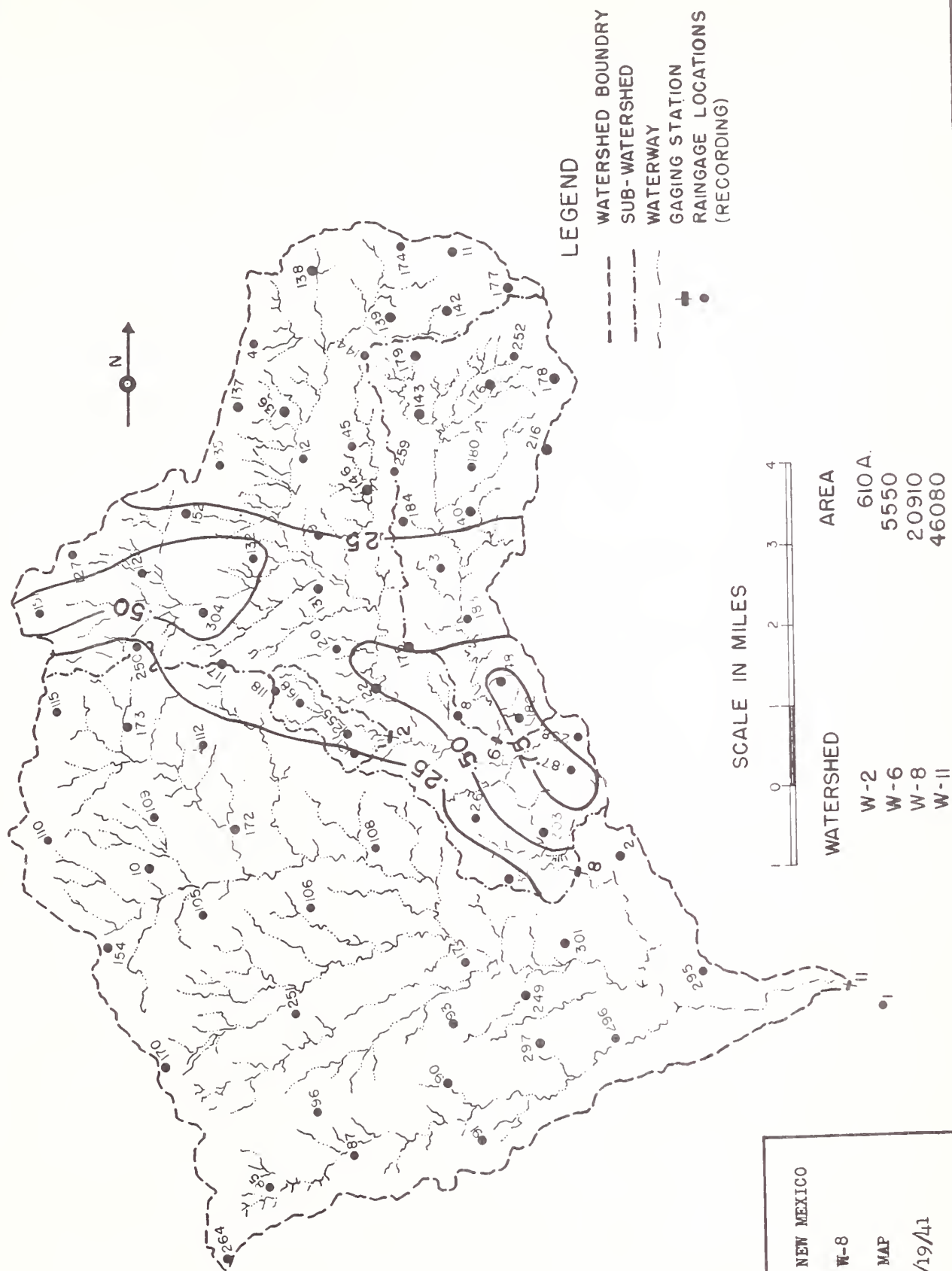


Runoff (in./hr.)

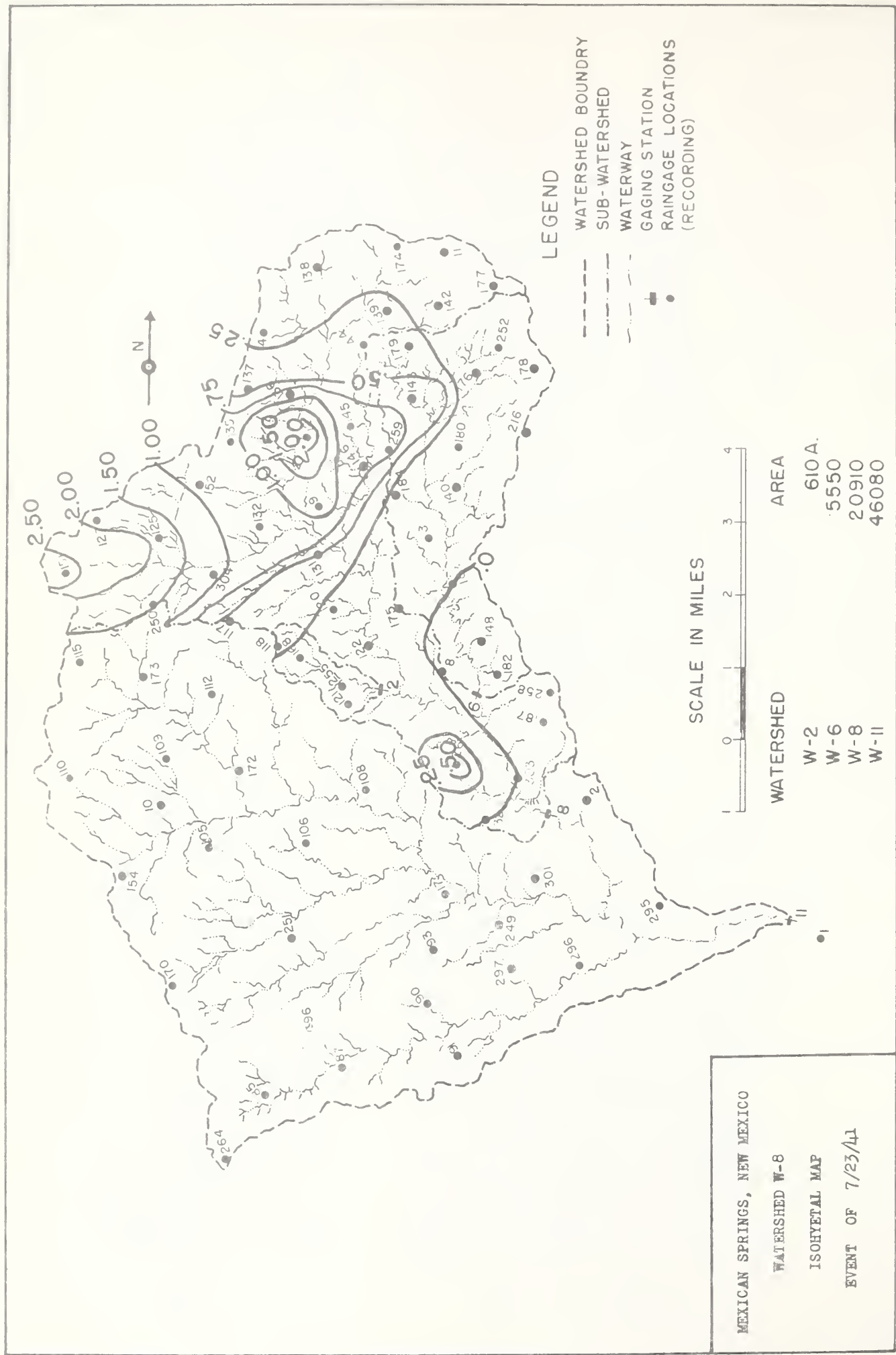


Runoff (in./hr.)

MEXICAN SPRINGS, NEW MEXICO WATERSHED W-8







| Mexican Springs, New Mexico                                                                                                                                                                                                                                                                                                                   |                      |                    | Watershed W-11   |                      |                  | (48.8)           | Area - 46,080 acres |                  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|---------------------|------------------|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                         |                      |                    | Rainfall         |                      |                  | Runoff           |                     |                  |  |
| Date                                                                                                                                                                                                                                                                                                                                          | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr)     | Acc.<br>(inches) |  |
| Event of August 26, 1939                                                                                                                                                                                                                                                                                                                      |                      |                    |                  |                      |                  |                  |                     |                  |  |
| Raingage R-108                                                                                                                                                                                                                                                                                                                                |                      |                    | 8-26-39          | Raingage R-108       |                  | 8-26-39          |                     |                  |  |
| 7-28-39                                                                                                                                                                                                                                                                                                                                       | 0.37                 | 0.0213             | 2:35p            | 0.                   | 0.               | 4:30p            | 0.                  | 0.               |  |
| 7-29                                                                                                                                                                                                                                                                                                                                          | .28                  | .0212              | 1:50             | .20                  | .05              | 1:35             | .010                | .0003            |  |
| 8-23                                                                                                                                                                                                                                                                                                                                          | .34                  | .004               | 3:00             | 3.30                 | .60              | 1:40             | .030                | .0020            |  |
| 8-24                                                                                                                                                                                                                                                                                                                                          | .07                  | .007               | 1:05             | 3.00                 | .85              | 1:45             | .041                | .0050            |  |
| 8-25                                                                                                                                                                                                                                                                                                                                          | .07                  | .008               | 1:10             | 1.80                 | 1.00             | 1:50             | .054                | .0090            |  |
| Raingage R-251                                                                                                                                                                                                                                                                                                                                |                      |                    | 1:20             | .18                  | 1.03             | 1:55             | .065                | .0141            |  |
| 8-23-39                                                                                                                                                                                                                                                                                                                                       | .33                  | .004               | 1:30e            | .18                  | 1.06             | 5:00             | .070                | .0197            |  |
| 8-24                                                                                                                                                                                                                                                                                                                                          | .16                  | .007               |                  |                      |                  | 1:05             | .066                | .0254            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:09             | .059                | .0295            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:14             | .051                | .0341            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:20             | .043                | .0388            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:30             | .032                | .0450            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:40             | .022                | .0495            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:50             | .016                | .0527            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 6:00             | .012                | .0551            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:10             | .010                | .0569            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:20             | .009                | .0585            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:30             | .008                | .0599            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 1:50             | .006                | .0623            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 7:10             | .005                | .0641            |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 8-27-39          |                     |                  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                  |                      |                  | 3:00p e          | 0.                  | .0764            |  |
| WATERSHED CONDITIONS: 80% of area is bare. Upper two thirds of watershed has pinon and juniper with scattered shrubs (mountain mahogany and serviceberry) and very sparse understory of short grasses. Scattered ponderosa pine at higher elevations. Lower third of area is sparse grassland, principal species being bluegrass and falleta. |                      |                    |                  |                      |                  |                  |                     |                  |  |

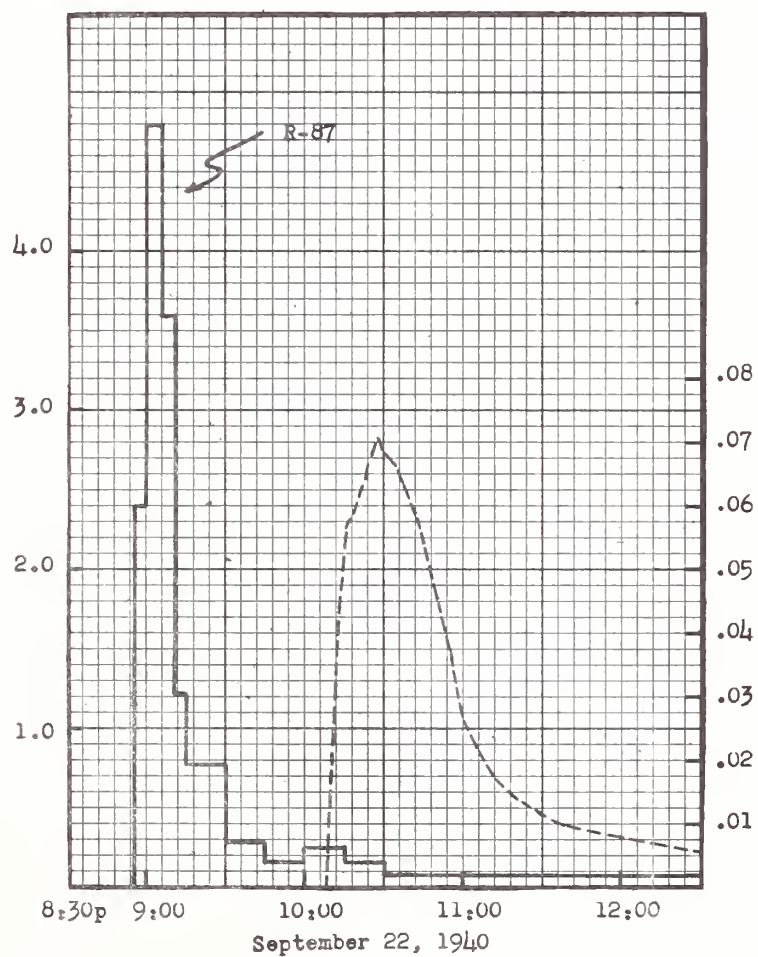
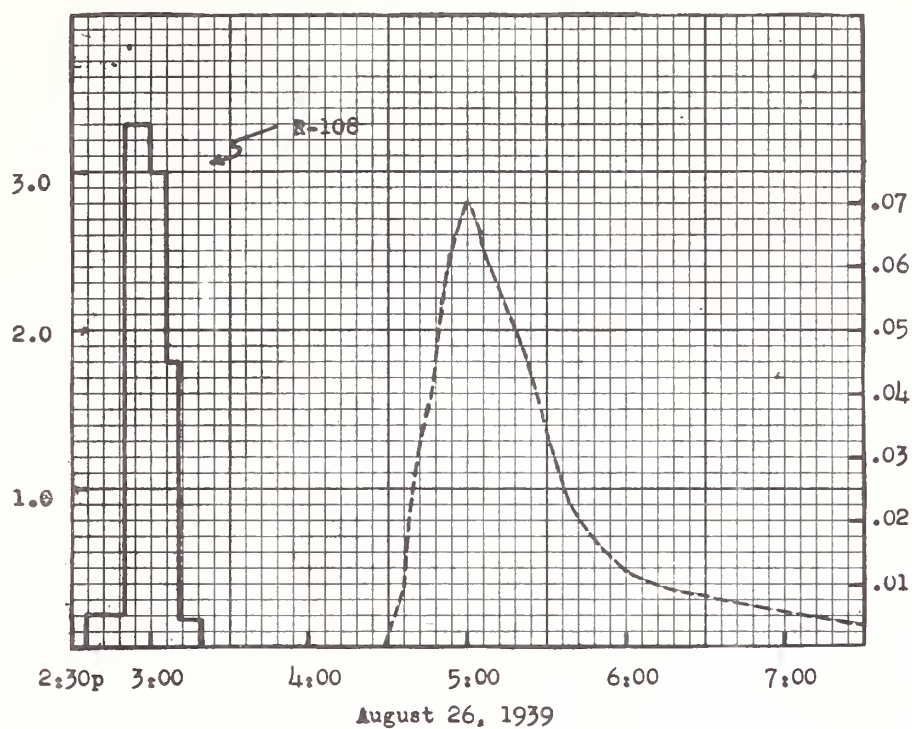
Notes: To convert runoff in in/hr to cfs, multiply by 46,463.  
See 48.2, Sheet 4 for isohyetal map of this event.

Notes: To convert runoff in in/hr to cfs, multiply by 46,463.  
See 48.2, Sheet 4 for isohyetal map of this event.

| Mexican Springs, New Mexico                                                                                                                                                                                                                                                                                                                   |                      |                    | Watershed W-11              |                       |                  | (48.8)           |                 |                  | Area - 46,080 acres |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-----------------------------|-----------------------|------------------|------------------|-----------------|------------------|---------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                         |                      |                    | Rainfall                    |                       |                  | Runoff           |                 |                  |                     |  |  |
| Date                                                                                                                                                                                                                                                                                                                                          | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time            | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    | Event of September 22, 1940 |                       |                  |                  |                 |                  |                     |  |  |
| Raingage R-87                                                                                                                                                                                                                                                                                                                                 |                      |                    | 9-22-40                     | Raingage R-87         |                  | 9-22-40          |                 |                  |                     |  |  |
| 8-24-40                                                                                                                                                                                                                                                                                                                                       | 0.18                 | 0.0013             | 8:55p                       | 0.                    | 0.               | 10:08p           | .0003           | 0.               |                     |  |  |
| 8-25                                                                                                                                                                                                                                                                                                                                          | .17                  | .0223              | 9:00                        | 2.40                  | .20              | 112              | .0325           | .0017            |                     |  |  |
| 9-5                                                                                                                                                                                                                                                                                                                                           | .12                  | .0256              | 1:05                        | 4.80                  | .60              | 114              | .0437           | .0030            |                     |  |  |
| 9-10                                                                                                                                                                                                                                                                                                                                          | .39                  | .0112              | 1:10                        | 3.60                  | .90              | 116              | .0527           | .0046            |                     |  |  |
| 9-11                                                                                                                                                                                                                                                                                                                                          | .08                  | .0189              | 1:15                        | 1.20                  | 1.00             | 118              | .0570           | .0065            |                     |  |  |
| 9-12                                                                                                                                                                                                                                                                                                                                          | .54                  | .0367              | 9:30                        | .76                   | 1.19             | 121              | .0625           | .0095            |                     |  |  |
| 9-17                                                                                                                                                                                                                                                                                                                                          | .70                  | .0018              | 1:45                        | .28                   | 1.26             | 124              | .0663           | .0127            |                     |  |  |
| 9-18                                                                                                                                                                                                                                                                                                                                          | .03                  | .0143              | 10:00                       | .16                   | 1.30             | 126              | .0684           | .0150            |                     |  |  |
| 9-21                                                                                                                                                                                                                                                                                                                                          | .20                  | .0611              | 1:15                        | .24                   | 1.36             | 128              | .0706           | .0173            |                     |  |  |
| 9-22                                                                                                                                                                                                                                                                                                                                          | .20                  | .0049              | 1:30                        | .16                   | 1.40             | 130              | .0689           | .0196            |                     |  |  |
| Raingage R-187                                                                                                                                                                                                                                                                                                                                |                      |                    | 9-23-40                     |                       |                  | 135              | .0669           | .0253            |                     |  |  |
| 8-23-39                                                                                                                                                                                                                                                                                                                                       | .05                  |                    | 1:00a                       | .08                   | 1.60             | 142              | .0584           | .0326            |                     |  |  |
| 8-24                                                                                                                                                                                                                                                                                                                                          | .14                  |                    |                             |                       |                  | 145              | .0534           | .0354            |                     |  |  |
| 8-25                                                                                                                                                                                                                                                                                                                                          | .05                  |                    |                             |                       |                  | 150              | .0454           | .0395            |                     |  |  |
| 9-5                                                                                                                                                                                                                                                                                                                                           | .52                  |                    |                             |                       |                  |                  |                 |                  |                     |  |  |
| 9-10                                                                                                                                                                                                                                                                                                                                          | .15                  |                    | 9-22-40                     | Raingage R-187        |                  | 155              | .0373           | .0431            |                     |  |  |
| 9-11                                                                                                                                                                                                                                                                                                                                          | .30                  |                    | 9:18p                       | 0.                    | 0.               | 11:00            | .0273           | .0457            |                     |  |  |
| 9-12                                                                                                                                                                                                                                                                                                                                          | .11                  |                    | 1:30                        | 3.55                  | .71              | 105              | .0218           | .0526            |                     |  |  |
| 9-18                                                                                                                                                                                                                                                                                                                                          | .28                  |                    | 1:35                        | .96                   | .79              | 110              | .0178           | .0494            |                     |  |  |
| 9-21                                                                                                                                                                                                                                                                                                                                          | .45                  |                    | 1:45                        | .24                   | .83              | 120              | .0137           | .0520            |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    | 10:45                       | .04                   | .87              |                  |                 |                  |                     |  |  |
| WATERSHED CONDITIONS: 80% of area is bare. Upper two thirds of watershed has pinon and juniper with scattered shrubs (mountain mahogany and serviceberry) and very sparse understory of short grasses. Scattered ponderosa pine at higher elevations. Lower third of area is sparse grassland, principal species being bluegrass and galleta. |                      |                    |                             |                       |                  | 130              | .0116           | .0541            |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                             |                       |                  | 140              | .0098           | .0559            |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                             |                       |                  | 12:00mt          | .0077           | .0588            |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                             |                       |                  | 9-23-40          |                 |                  |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                             |                       |                  | 12:30a           | .0052           | .0619            |                     |  |  |
|                                                                                                                                                                                                                                                                                                                                               |                      |                    |                             |                       |                  | 11:00p           | 0.              | .0711            |                     |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 46,463.

Notes: To convert runoff in in/hr to cfs, multiply by 46,463.



MEXICAN SPRINGS, NEW MEXICO WATERSHED W-11



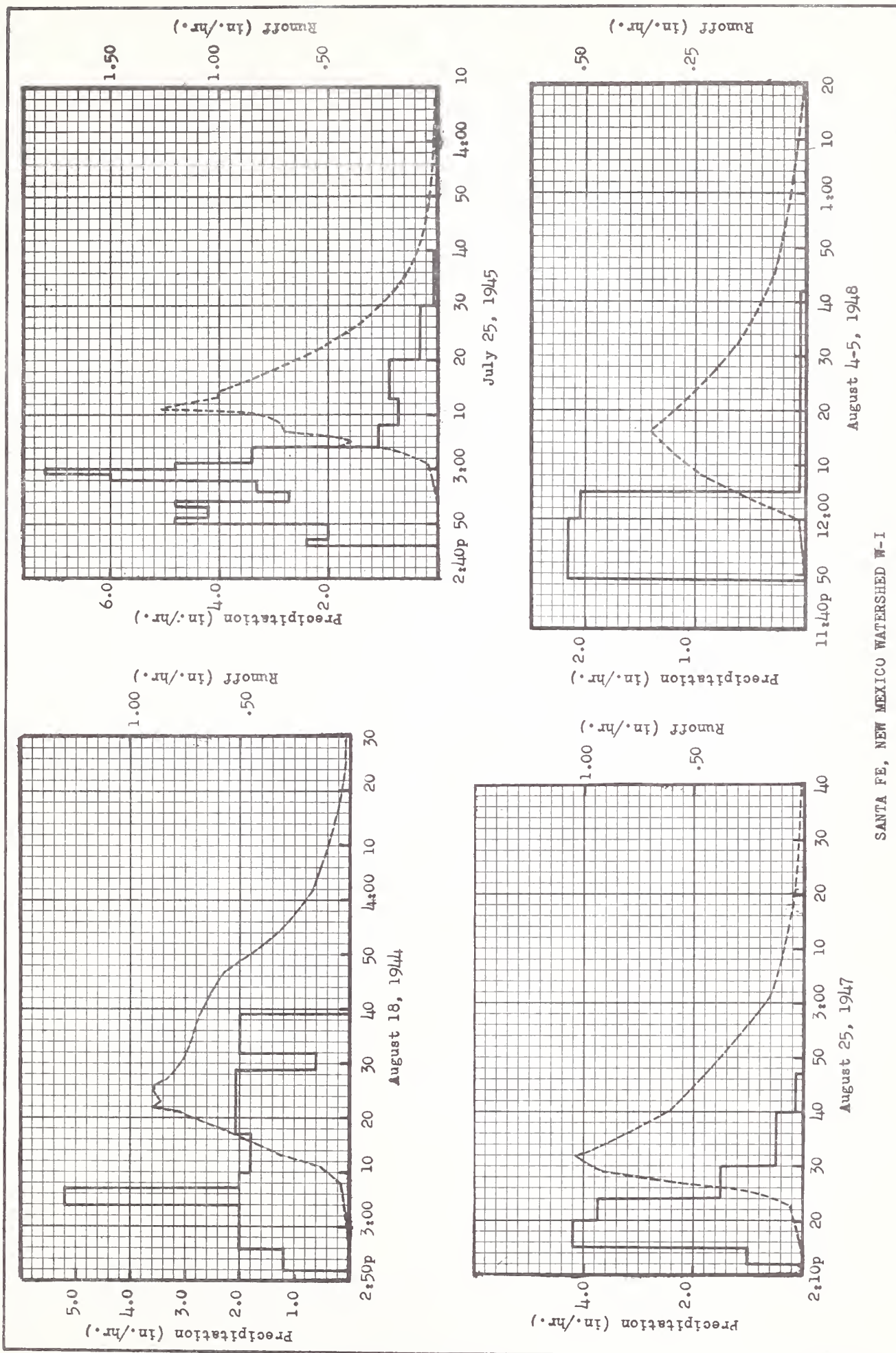


| Santa Fe, New Mexico                                                                                                                                                                                                                              |                      |                    | Watershed W-I    |                      |                  | (49.1)           |                 |                  | Area - 141 acres |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                             |                      |                    | Rainfall         |                      |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| <u>Event of August 18, 1944</u>                                                                                                                                                                                                                   |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 7-18-44                                                                                                                                                                                                                                           | 0.56                 | 0.019              | 8-18-44          | Raingage             | R-1              | 8-18-44          |                 |                  |                  |  |  |
| 7-19                                                                                                                                                                                                                                              | .11                  | 0.                 | 2:52 p           | 0.                   | 0.               | 2:58 p           | 0.              | 0.               |                  |  |  |
| 7-20                                                                                                                                                                                                                                              | .46                  | .007               | :56              | 1.20                 | .08              | 3:08             | .038            | .0018            |                  |  |  |
| 7-21                                                                                                                                                                                                                                              | .12                  | 0.                 | 3:04             | 2.00                 | .34              | :11              | .133            | .0050            |                  |  |  |
| 7-24                                                                                                                                                                                                                                              | .21                  | 0.                 | :07              | 5.20                 | .60              | :13              | .312            | .0125            |                  |  |  |
| 8-5                                                                                                                                                                                                                                               | .24                  | 0.                 | :10              | 2.00                 | .70              | :16              | .463            | .0322            |                  |  |  |
| 8-6                                                                                                                                                                                                                                               | .17                  | 0.                 | :17              | 1.80                 | .91              | :18              | .571            | .0493            |                  |  |  |
| 8-8                                                                                                                                                                                                                                               | 1.24                 | .033               | :29              | 2.05                 | 1.32             | :20              | .720            | .0710            |                  |  |  |
| 8-9                                                                                                                                                                                                                                               | .08                  | 0.                 | :32              | .60                  | 1.35             | :21              | .777            | .0835            |                  |  |  |
| 8-17                                                                                                                                                                                                                                              | .07                  | 0.                 | :39              | 2.00                 | 1.58             | :22              | .901            | .0975            |                  |  |  |
| <u>Watershed Conditions:</u> Sparsely vegetated rangeland. About 70% of area is bare. Vegetative cover consists of short grasses (blue, black, and side-oats grama), shrubs (rabbitbrush and snakeweed), and a few small pinon and juniper trees. |                      |                    |                  |                      |                  | :23              | .862            | .1122            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :24              | .880            | .1267            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :25              | .895            | .1415            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :26              | .893            | .1564            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :27              | .840            | .1708            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :36              | .705            | .2867            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :43              | .631            | .3652            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :47              | .560            | .4049            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :50              | .458            | .4303            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :52              | .392            | .4445            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :56              | .280            | .4667            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | 4:02             | .178            | .4893            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :15              | .068            | .5144            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :24              | .029            | .5214            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :33              | .013            | .5244            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | 5:02             | 0.              | .5262            |                  |  |  |
| <u>Event of July 25, 1945</u>                                                                                                                                                                                                                     |                      |                    |                  |                      |                  |                  |                 |                  |                  |  |  |
| 6-25-45                                                                                                                                                                                                                                           | 0.06                 | 0.                 | 7-25-45          | Raingage             | R-1              | 7-25-45          |                 |                  |                  |  |  |
| 7-1                                                                                                                                                                                                                                               | .18                  | 0.                 | 2:46 p           | 0.                   | 0.               | 2:54 p           | 0.              | 0.               |                  |  |  |
| 7-2                                                                                                                                                                                                                                               | .33                  | .003               | :47              | 2.40                 | .04              | 3:01             | .046            | .0024            |                  |  |  |
| 7-14                                                                                                                                                                                                                                              | .14                  | 0.                 | :50              | 2.00                 | .14              | :03              | .199            | .0061            |                  |  |  |
| 7-17                                                                                                                                                                                                                                              | .07                  | 0.                 | :51              | 4.80                 | .22              | :04              | .458            | .0116            |                  |  |  |
| 7-18                                                                                                                                                                                                                                              | .60                  | .006               | :52              | 4.20                 | .29              | :05              | .392            | .0187            |                  |  |  |
| <u>Watershed Conditions:</u> Sparsely vegetated rangeland. About 70% of area is bare. Vegetative cover consists of short grasses (blue, black, and side-oats grama), shrubs (rabbitbrush and snakeweed), and a few small pinon and juniper trees. |                      |                    |                  |                      |                  | :06              | .525            | .0263            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :07              | .703            | .0365            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :08              | .726            | .0484            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :10              | .850            | .0747            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :11              | 1.272           | .0924            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :13              | 1.018           | .1306            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :14              | 1.019           | .1476            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :17              | .827            | .1925            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :25              | .422            | .2714            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :34              | .170            | .3135            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :48              | .048            | .3368            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | 4:09             | .006            | .3445            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :26              | 0.              | .3454            |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :13              | .72             | 1.24             |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :20              | .86             | 1.34             |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | :30              | .30             | 1.39             |                  |  |  |
|                                                                                                                                                                                                                                                   |                      |                    |                  |                      |                  | 4:00             | .06             | 1.40             |                  |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 142.24

| Santa Fe, New Mexico                                                                                                                                                                                                                       |                      |                    | Watershed W-I    |                       |                  | (49.1)           |                 |                  | Area - 141 acres |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|-----------------------|------------------|------------------|-----------------|------------------|------------------|--|--|
| Antecedent conditions                                                                                                                                                                                                                      |                      |                    | Rainfall         |                       |                  | Runoff           |                 |                  |                  |  |  |
| Date                                                                                                                                                                                                                                       | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |                  |  |  |
| Event of August 25, 1947                                                                                                                                                                                                                   |                      |                    |                  |                       |                  |                  |                 |                  |                  |  |  |
| 8-9-47                                                                                                                                                                                                                                     | 0.20                 | 0.                 | 8-25-47          | Raingage R-1          |                  | 8-25-47          |                 |                  |                  |  |  |
| 8-15                                                                                                                                                                                                                                       | .58                  | .0086              | 2:12p            | 0.                    | 0.               | 2:13p            | 0.              | 0.               |                  |  |  |
| 8-16                                                                                                                                                                                                                                       | .11                  | 0.                 | :15              | 1.00                  | .05              | :15              | .009            | .0002            |                  |  |  |
| 8-18                                                                                                                                                                                                                                       | .14                  | 0.                 | :20              | 4.20                  | .40              | :23              | .058            | .0047            |                  |  |  |
| 8-19                                                                                                                                                                                                                                       | .27                  | .0014              | :24              | 3.75                  | .65              | :26              | .369            | .0155            |                  |  |  |
| 8-20                                                                                                                                                                                                                                       | .12                  | 0.                 | :30              | 1.50                  | .80              | :29              | .915            | .0476            |                  |  |  |
| 8-21                                                                                                                                                                                                                                       | .34                  | .0025              | :40              | .48                   | .88              | :32              | 1.04            | .0965            |                  |  |  |
| 8-22                                                                                                                                                                                                                                       | .16                  | 0.                 | :47e             | .17                   | .90              | :40              | .613            | .2067            |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 70% of area is bare. Vegetative cover consists of short grasses (blue, black, and side-oats grama), shrubs (rabbitbrush and snakeweed), and a few small pinon and juniper trees. |                      |                    |                  |                       |                  | 3:01             | .151            | .3403            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | :20              | .039            | .3703            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | :44              | .007            | .3793            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 4:20e            | 0.              | .3807            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  |                  |                 |                  |                  |  |  |
| Event of August 4-5, 1948                                                                                                                                                                                                                  |                      |                    |                  |                       |                  |                  |                 |                  |                  |  |  |
| 7-18-48                                                                                                                                                                                                                                    | 0.11                 | 0.                 | 8-4,5-48         | Raingage R-2          |                  | 8-4,5-48         |                 |                  |                  |  |  |
| 7-19                                                                                                                                                                                                                                       | .16                  | 0.                 | 11:49p           | 0.                    | 0.               | 11:50p           | 0.              | 0.               |                  |  |  |
| 7-20                                                                                                                                                                                                                                       | .15                  | 0.                 | 12:00mt          | 2.18                  | .40              | 12:00mt          | .015            | .0013            |                  |  |  |
| 7-24                                                                                                                                                                                                                                       | .05                  | 0.                 | :05a             | 2.04                  | .57              | :01              | .049            | .0018            |                  |  |  |
| 7-27                                                                                                                                                                                                                                       | .40                  | 0.                 | :42e             | .20                   | .69              | :08              | .232            | .0182            |                  |  |  |
| 8-4                                                                                                                                                                                                                                        | .60                  | 0.                 |                  |                       |                  | :16              | .356            | .0575            |                  |  |  |
| Watershed Conditions: Sparsely vegetated rangeland. About 70% of area is bare. Vegetative cover consists of short grasses (blue, black, and side-oats grama), shrubs (rabbitbrush and snakeweed), and a few small pinon and juniper trees. |                      |                    |                  |                       |                  | :32              | .157            | .1259            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | :45              | .072            | .1507            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | 1:15a            | .005            | .1701            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  | :30e             | 0.              | .1709            |                  |  |  |
|                                                                                                                                                                                                                                            |                      |                    |                  |                       |                  |                  |                 |                  |                  |  |  |

Notes: To convert runoff in in/hr to cfs, multiply by 142.24



SANTA FE, NEW MEXICO WATERSHED W-1

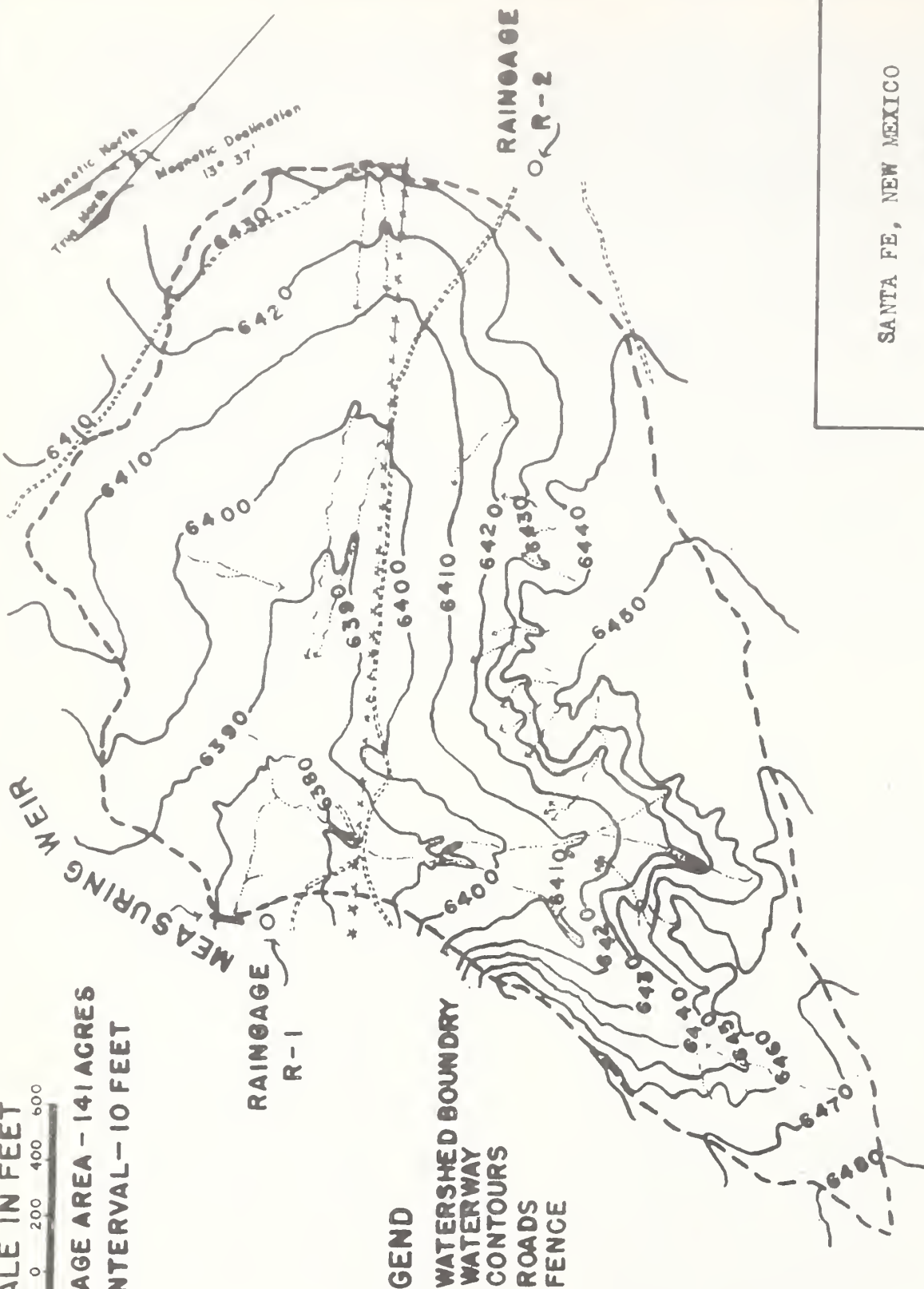


SCALE IN FEET  
200 0 200 400 600

TOTAL DRAINAGE AREA - 141 ACRES  
CONTOUR INTERVAL - 10 FEET

# LEGEND

- WATERSHED BOUNDARY
- ... WATERWAY
- ~ CONTOURS
- ROADS
- FENCE



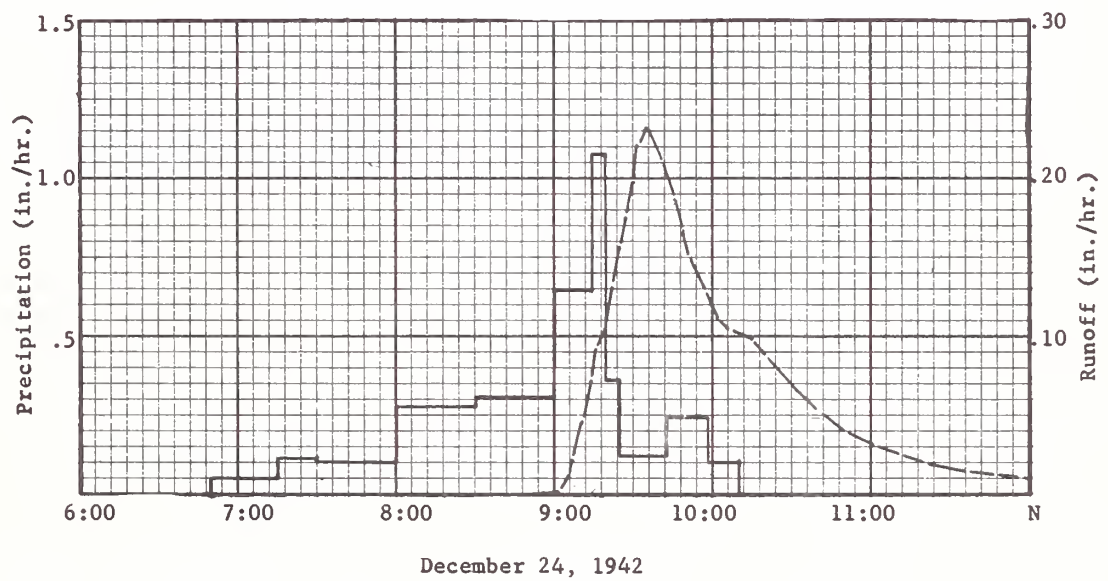
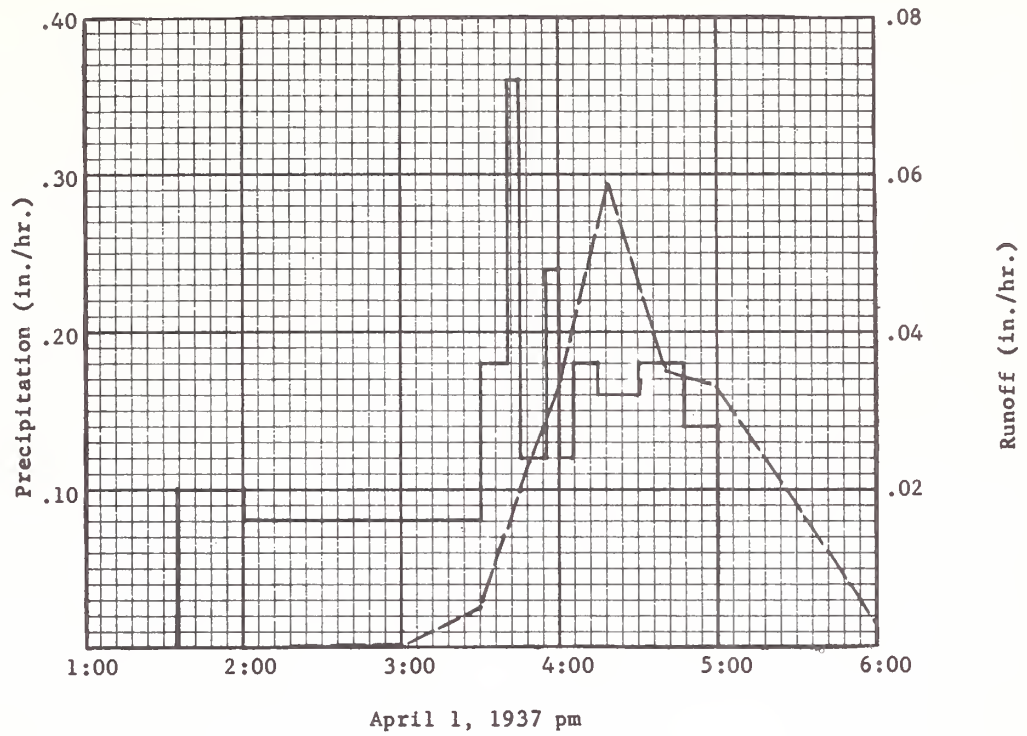
SANTA FE, NEW MEXICO

WATERSHED W-1

| Placerville, California                                                                    |                   |                 | Watershed W-1 (50.1) |                   |               | Area - 41 acres |              |               |
|--------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-----------------|--------------|---------------|
| Antecedent conditions                                                                      |                   |                 | Rainfall             |                   |               | Runoff          |              |               |
| Date                                                                                       | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time   | Rate (in/hr) | Acc. (inches) |
| <b>Event of April 1, 1937</b>                                                              |                   |                 |                      |                   |               |                 |              |               |
| 3-11-37                                                                                    | 0.52              | 0.020           | 4-1-37               | Raingage          | No. 1         | 4-1-37          |              |               |
| 3-12                                                                                       | 1.01              | .250            | 1:35 p               | 0                 | 0             | 2:00 p          | 0            | 0             |
| 3-13                                                                                       | 0                 | .009            | 2:00                 | .10               | .04           | 3:10            | .0002        | 0             |
| 3-16                                                                                       | .18               | 0               | :30                  | .08               | .08           | :30             | .0056        | .001          |
| 3-17                                                                                       | .61               | .122            | 3:00                 | .08               | .12           | :50             | .0235        | .006          |
| 3-19                                                                                       | 1.00              | .258            | :30                  | .08               | .16           | 4:00            | .0331        | .011          |
| 3-20                                                                                       | .19               | .050            | :40                  | .18               | .19           | :20             | .0585        | .026          |
| 3-21                                                                                       | 2.96              | 1.503           | :45                  | .36               | .22           | :40             | .0353        | .042          |
| 3-22                                                                                       | .64               | .565            | :55                  | .12               | .24           | 5:00            | .0331        | .053          |
| 3-23                                                                                       | .47               | .245            | 4:00                 | .24               | .26           | :25             | .0133        | .063          |
| 3-24                                                                                       | .77               | .458            | :05                  | .12               | .27           | 6:00            | .0027        | .110          |
| 3-25                                                                                       | .02               | 0               | :15                  | .18               | .30           | 7:10            | .0015        | .112          |
| 3-26                                                                                       | .07               | .021            | :30                  | .16               | .34           | :30             | .0027        | .113          |
| 3-27                                                                                       | .61               | .210            | :47                  | .18               | .39           | 8:05            | .0012        | .114          |
| <b>Watershed Conditions:</b>                                                               |                   |                 | 5:00e                | .14               | .42           |                 |              |               |
| 90% straight row orchard with cover crop cultivated in the spring. 10% cultivated pasture. |                   |                 |                      |                   |               |                 |              |               |
| <b>Event of December 24, 1942</b>                                                          |                   |                 |                      |                   |               |                 |              |               |
| 11-27-42                                                                                   | 1.19              | 0.01            | 12-24-42             | Raingage          | No. 1         | 12-24-42        |              |               |
| 12-2                                                                                       | .08               | 0               | 6:50 a               | 0                 | 0             | 8:56 a          | 0.0012       | 0             |
| 12-5                                                                                       | .02               | 0               | 7:15                 | .05               | .02           | 9:01            | .0018        | 0             |
| 12-6                                                                                       | .85               | .02             | :30                  | .12               | .05           | :05             | .0119        | .001          |
| 12-19                                                                                      | .16               | 0               | 8:00                 | .10               | .10           | :07             | .0272        | .001          |
| 12-22                                                                                      | 1.20              | .03             | :30                  | .28               | .24           | :10             | .0466        | .003          |
| 12-23                                                                                      | .81               | .18             | 9:00                 | .32               | .40           | :14             | .0721        | .007          |
| 12-24 to                                                                                   |                   |                 | :15                  | .64               | .54           | :16             | .0923        | .010          |
| 6:00 a                                                                                     | .03               | 0               | :20                  | 1.08              | .63           | :19             | .1047        | .015          |
| <b>Watershed Conditions:</b>                                                               |                   |                 | :25                  | .36               | .66           | :22             | .1309        | .021          |
| 90% straight row orchard with cover crop cultivated in the spring. 10% cultivated pasture. |                   |                 | :43                  | .13               | .70           | :25             | .1557        | .028          |
|                                                                                            |                   |                 | :58                  | .24               | .76           | :27             | .1742        | .033          |
|                                                                                            |                   |                 | 10:10e               | .10               | .78           | :30             | .1975        | .043          |
|                                                                                            |                   |                 |                      |                   |               | :32             | .2218        | .050          |
|                                                                                            |                   |                 |                      |                   |               | :34             | .2303        | .057          |
|                                                                                            |                   |                 |                      |                   |               | :36             | .2303        | .065          |
|                                                                                            |                   |                 |                      |                   |               | :40             | .2135        | .080          |
|                                                                                            |                   |                 |                      |                   |               | :45             | .1858        | .096          |
|                                                                                            |                   |                 |                      |                   |               | :51             | .1521        | .113          |
|                                                                                            |                   |                 |                      |                   |               | :57             | .1309        | .127          |
|                                                                                            |                   |                 |                      |                   |               | 10:02           | .1110        | .137          |
|                                                                                            |                   |                 |                      |                   |               | :05             | .1047        | .143          |
|                                                                                            |                   |                 |                      |                   |               | :15             | .0984        | .160          |
|                                                                                            |                   |                 |                      |                   |               | :20             | .0894        | .170          |
|                                                                                            |                   |                 |                      |                   |               | :31             | .0695        | .182          |
|                                                                                            |                   |                 |                      |                   |               | :40             | .0539        | .191          |
|                                                                                            |                   |                 |                      |                   |               | :50             | .0420        | .199          |
|                                                                                            |                   |                 |                      |                   |               | 11:00           | .0333        | .206          |
|                                                                                            |                   |                 |                      |                   |               | :20             | .0216        | .215          |
|                                                                                            |                   |                 |                      |                   |               | :35             | .0163        | .220          |
|                                                                                            |                   |                 |                      |                   |               | 12:05 p         | .0092        | .226          |
|                                                                                            |                   |                 |                      |                   |               | :30             | .0067        | .229          |

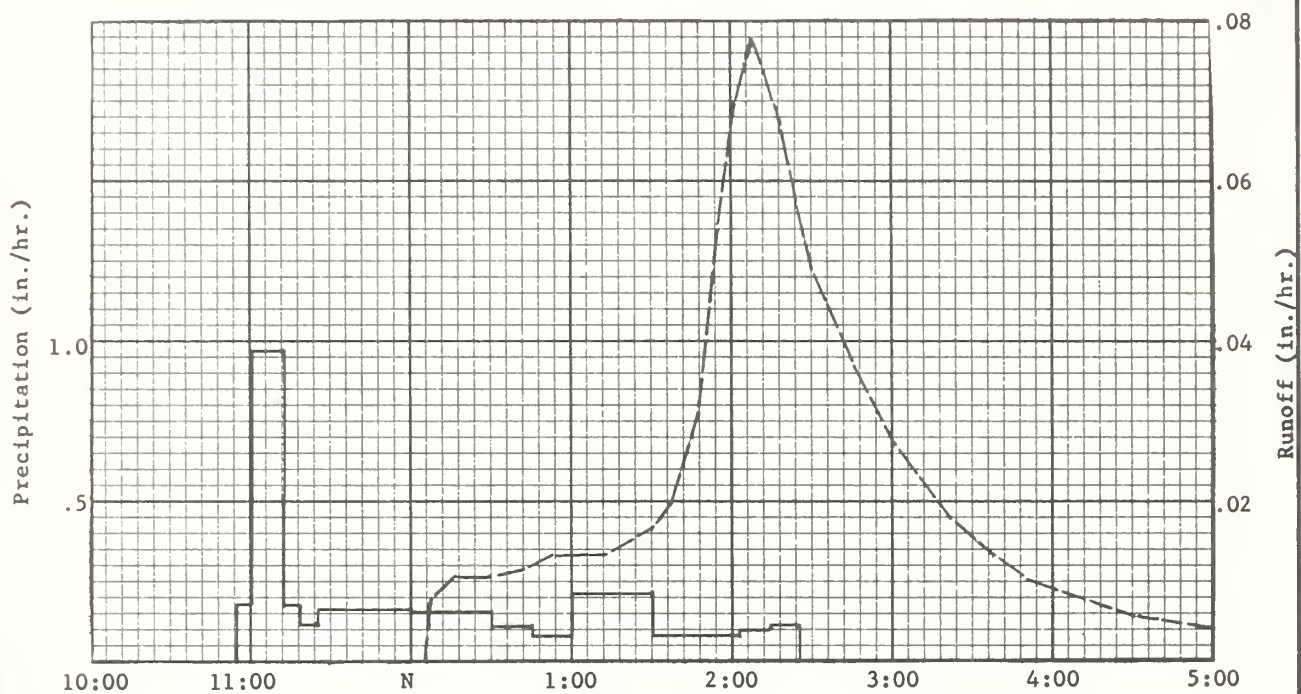
Notes: To convert runoff in in/hr to cfs, multiply by 41.3403

| Placerville, California                                                                                                          |                      |                    | Watershed W-1 (50.1) |                      |                  | Area - 41 acres  |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                            |                      |                    | Rainfall             |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                             | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of December 28, 1942                                                                                                       |                      |                    |                      |                      |                  |                  |                 |                  |
| 12-2-42                                                                                                                          | 0.08                 | 0                  | 12-28-42             | Raingage             | No. 1            | 12-28-42         |                 |                  |
| 12-5                                                                                                                             | .02                  | 0                  | 10:55 a              | 0                    | 0                | 12:00 N          | 0               | 0                |
| 12-6                                                                                                                             | .85                  | .02                | 11:00                | .36                  | .03              | :05 p            | 0               | 0                |
| 12-19                                                                                                                            | .16                  | 0                  | :13                  | .97                  | .24              | :08              | .0079           | 0                |
| 12-22                                                                                                                            | 1.20                 | .03                | :20                  | .34                  | .28              | :17              | .0104           | .002             |
| 12-23                                                                                                                            | .81                  | .18                | :25                  | .12                  | .29              | :29              | .0104           | .004             |
| 12-24                                                                                                                            | .86                  | .24                | 12:00 N              | .17                  | .39              | :42              | .0119           | .006             |
| <u>Watershed Conditions:</u><br>90% straight row orchard with<br>cover crop cultivated in the<br>spring. 10% cultivated pasture. |                      |                    | :30 p                | .16                  | .47              | :52              | .0133           | .008             |
|                                                                                                                                  |                      |                    | :45                  | .12                  | .50              | 1:13             | .0133           | .013             |
|                                                                                                                                  |                      |                    | 1:00                 | .08                  | .52              | :30              | .0163           | .017             |
|                                                                                                                                  |                      |                    | :30                  | .22                  | .63              | :38              | .0197           | .019             |
|                                                                                                                                  |                      |                    | :48                  | .40                  | .75              | :47              | .0311           | .023             |
|                                                                                                                                  |                      |                    | 2:03                 | .08                  | .77              | :55              | .0539           | .029             |
|                                                                                                                                  |                      |                    | :15                  | .10                  | .79              | 2:01             | .0695           | .035             |
|                                                                                                                                  |                      |                    | :25 e                | .12                  | .81              | :05              | .0748           | .040             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :08              | .0777           | .044             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :11              | .0748           | .048             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :16              | .0695           | .054             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :25              | .0564           | .063             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :30              | .0491           | .067             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :45              | .0376           | .071             |
|                                                                                                                                  |                      |                    |                      |                      |                  | 3:01             | .0272           | .080             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :22              | .0180           | .088             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :38              | .0133           | .092             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :51              | .0104           | .094             |
|                                                                                                                                  |                      |                    |                      |                      |                  | 4:11             | .0079           | .097             |
|                                                                                                                                  |                      |                    |                      |                      |                  | :30              | .0055           | .099             |
|                                                                                                                                  |                      |                    |                      |                      |                  | 5:30             | .0026           | .104             |
| Notes: To convert runoff in in/hr to cfs, multiply by 41.3403                                                                    |                      |                    |                      |                      |                  |                  |                 |                  |



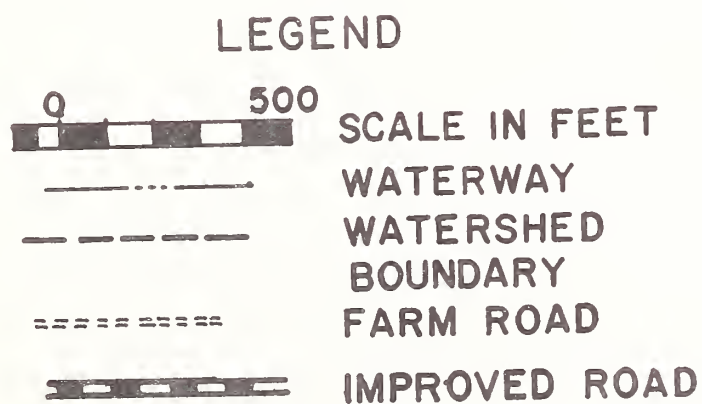
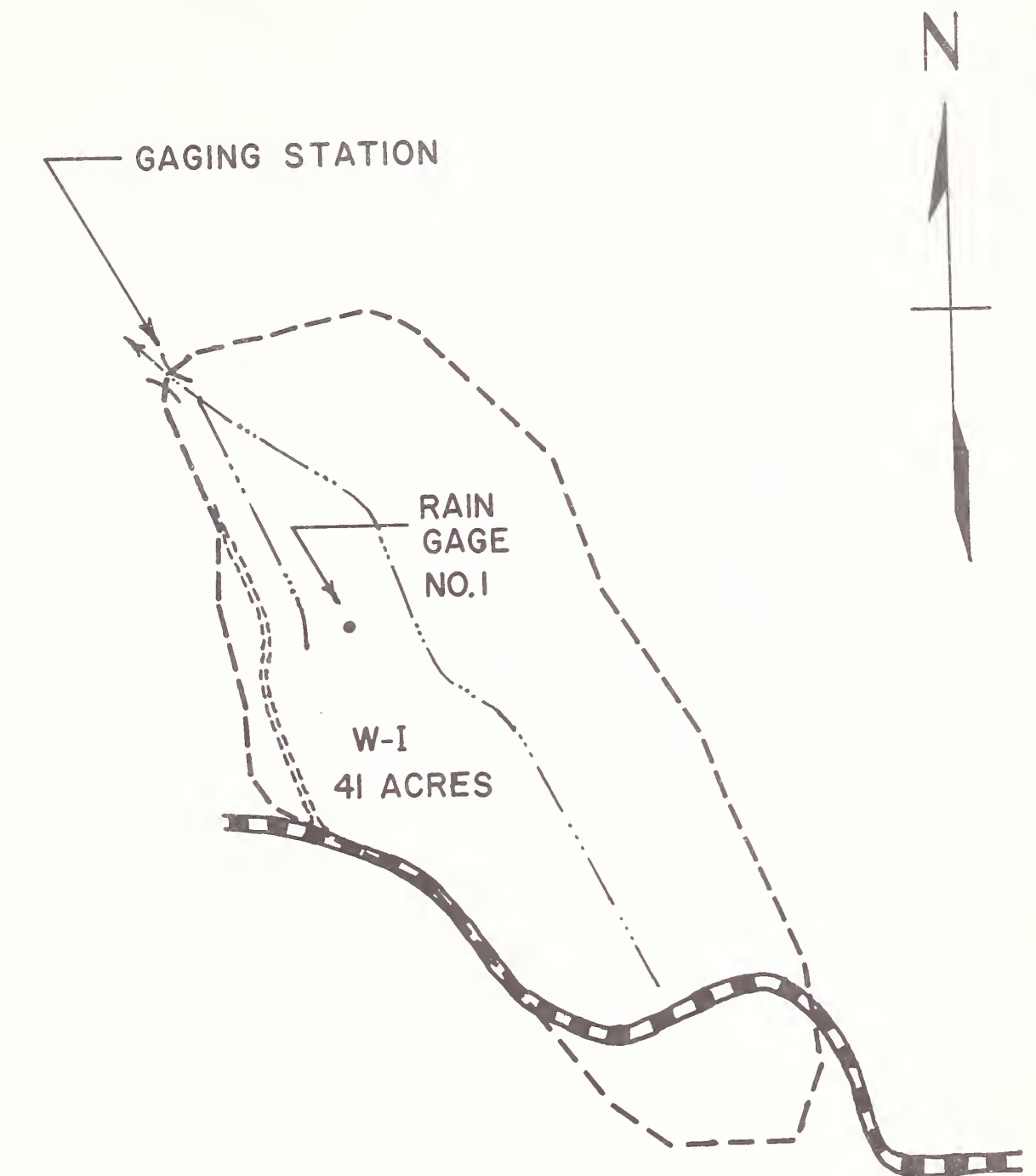
PLACERVILLE, CALIFORNIA WATERSHED W-1





December 28, 1942

PLACERVILLE, CALIFORNIA WATERSHED W-1



PLACERVILLE, CALIFORNIA  
WATERSHED W-I

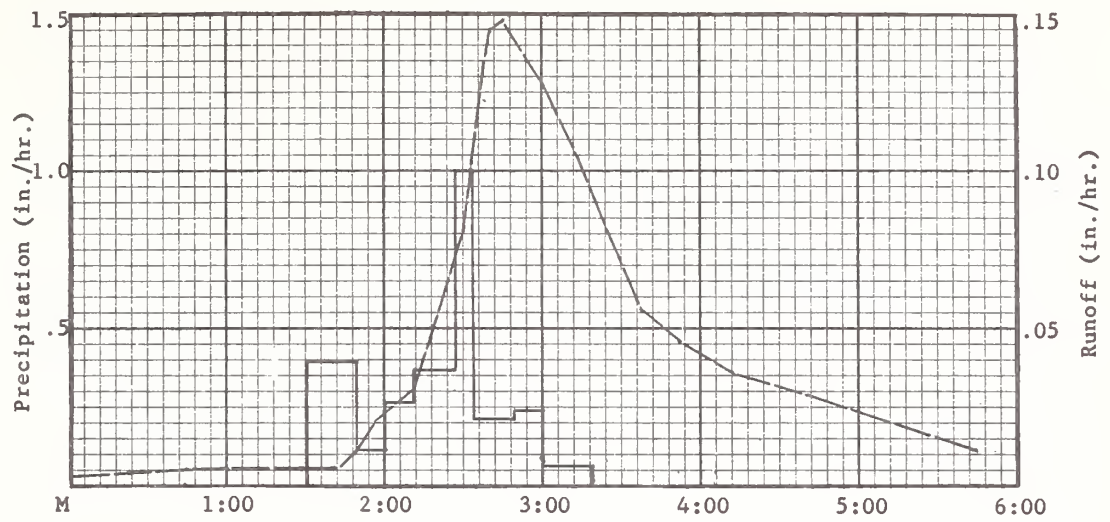


| Sebastopol, California                                                                                                                                                  |                   |                 | Watershed W-1 (52.1) |                   |               | Area - 83 acres |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-----------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                   |                   |                 | Rainfall             |                   |               | Runoff          |              |               |
| Date                                                                                                                                                                    | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time   | Rate (in/hr) | Acc. (inches) |
| <b>Event of April 3, 1941</b>                                                                                                                                           |                   |                 |                      |                   |               |                 |              |               |
| 3-4-41                                                                                                                                                                  | 0.22              | 0.096           | 4-3-41               | Raingage          | S-6R          | 4-3-41          |              |               |
| 3-5,8                                                                                                                                                                   | 0                 | .158            | 1:30 a               | 0                 | 0             | 12:00 M         | 0.0035       | 0             |
| 3-9,11                                                                                                                                                                  | 0                 | .010            | :50                  | .39               | .13           | :45             | .0053        | .003          |
| 3-12,15                                                                                                                                                                 | 0                 | .019            | 2:00                 | .12               | .15           | 1:30            | .0053        | .007          |
| 3-16,20                                                                                                                                                                 | 0                 | .010            | :11                  | .27               | .20           | :41             | .0063        | .008          |
| 3-21,22                                                                                                                                                                 | 0                 | .005            | :27                  | .37               | .30           | :50             | .0107        | .010          |
| 3-23,27                                                                                                                                                                 | 0                 | .014            | :33                  | 1.00              | .40           | :57             | .0207        | .011          |
| 3-28                                                                                                                                                                    | 1.24              | .013            | :50                  | .21               | .46           | 2:11            | .0304        | .017          |
| 3-29                                                                                                                                                                    | .53               | .061            | 3:00                 | .24               | .50           | :30             | .0809        | .035          |
| 3-30                                                                                                                                                                    | 1.97              | .614            | :20e                 | .06               | .52           | :39             | .1349        | .051          |
| 3-31                                                                                                                                                                    | .36               | .575            |                      |                   |               | :41             | .1443        | .056          |
| 4-1                                                                                                                                                                     | .48               | .227            |                      |                   |               | :45             | .1475        | .066          |
| 4-2                                                                                                                                                                     | .11               | .106            |                      |                   |               | 3:00            | .1287        | .100          |
| <b>Watershed Conditions:</b><br>15.6% apple orchard cultivated in general across slope with volunteer cover crop during winter.<br>84.4% pasture with good grass cover. |                   |                 |                      |                   |               | :12             | .1080        | .124          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | :25             | .0809        | .141          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | :38             | .0569        | .158          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | :52             | .0459        | .170          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | 4:12            | .0360        | .184          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | :40             | .0287        | .199          |
|                                                                                                                                                                         |                   |                 |                      |                   |               | 5:45            | .0221        | .201          |
| <b>Event of February 2, 1942</b>                                                                                                                                        |                   |                 |                      |                   |               |                 |              |               |
| 1-3-42                                                                                                                                                                  | 0                 | 0.024           | 2-2-42               | Raingage          | S-6R          | 2-2-42          |              |               |
| 1-4                                                                                                                                                                     | 0                 | .024            | 1:03 a               | 0                 | 0             | 1:00 a          | 0            | 0             |
| 1-5                                                                                                                                                                     | 0                 | .005            | :10                  | 1.11              | .13           | :08             | .0360        | .004          |
| 1-6                                                                                                                                                                     | 0                 | .005            | :17                  | 1.45              | .30           | :10             | .0524        | .006          |
| 1-7                                                                                                                                                                     | .15               | .371            | :22                  | .60               | .35           | :15             | .0914        | .012          |
| 1-8                                                                                                                                                                     | 1.00              | .170            | :35                  | .23               | .40           | :19             | .2056        | .022          |
| 1-9                                                                                                                                                                     | 0                 | .094            | 2:00                 | .12               | .45           | :23             | .2240        | .036          |
| 1-10,14                                                                                                                                                                 | 0                 | .024            | :30                  | .06               | .48           | :30             | .1984        | .061          |
| 1-15                                                                                                                                                                    | .14               | .005            | :50e                 | .06               | .50           | :45             | .1539        | .105          |
| 1-16,18                                                                                                                                                                 | 0                 | .014            |                      |                   |               | 2:00            | .1138        | .138          |
| 1-19                                                                                                                                                                    | .66               | .005            |                      |                   |               | :15             | .0887        | .164          |
| 1-20                                                                                                                                                                    | 0                 | .005            |                      |                   |               | :47             | .0660        | .205          |
| 1-21                                                                                                                                                                    | 0                 | .004            |                      |                   |               | 3:40            | .0480        | .258          |
| 1-22                                                                                                                                                                    | .05               | .101            |                      |                   |               | 4:45            | .0360        | .297          |
| 1-23                                                                                                                                                                    | 1.40              | .821            |                      |                   |               | 6:05            | .0287        | .336          |
| 1-24                                                                                                                                                                    | .98               | 1.069           |                      |                   |               |                 |              |               |
| 1-25                                                                                                                                                                    | .90               | .559            |                      |                   |               |                 |              |               |
| 1-26                                                                                                                                                                    | .42               | .428            |                      |                   |               |                 |              |               |
| 1-27                                                                                                                                                                    | .62               | .618            |                      |                   |               |                 |              |               |
| 1-28                                                                                                                                                                    | .35               | .225            |                      |                   |               |                 |              |               |
| 1-29                                                                                                                                                                    | 0                 | .007            |                      |                   |               |                 |              |               |
| 1-30                                                                                                                                                                    | .14               | .042            |                      |                   |               |                 |              |               |
| 1-31                                                                                                                                                                    | 0                 | .046            |                      |                   |               |                 |              |               |
| 2-1                                                                                                                                                                     | .02               | .094            |                      |                   |               |                 |              |               |
| 2-2 to 1:00 a                                                                                                                                                           | 0                 | .035            |                      |                   |               |                 |              |               |
| <b>Watershed Conditions:</b><br>15.6% apple orchard cultivated in general across slope with volunteer cover crop during winter.<br>84.4% pasture with good grass cover. |                   |                 |                      |                   |               |                 |              |               |
|                                                                                                                                                                         |                   |                 |                      |                   |               |                 |              |               |
|                                                                                                                                                                         |                   |                 |                      |                   |               |                 |              |               |

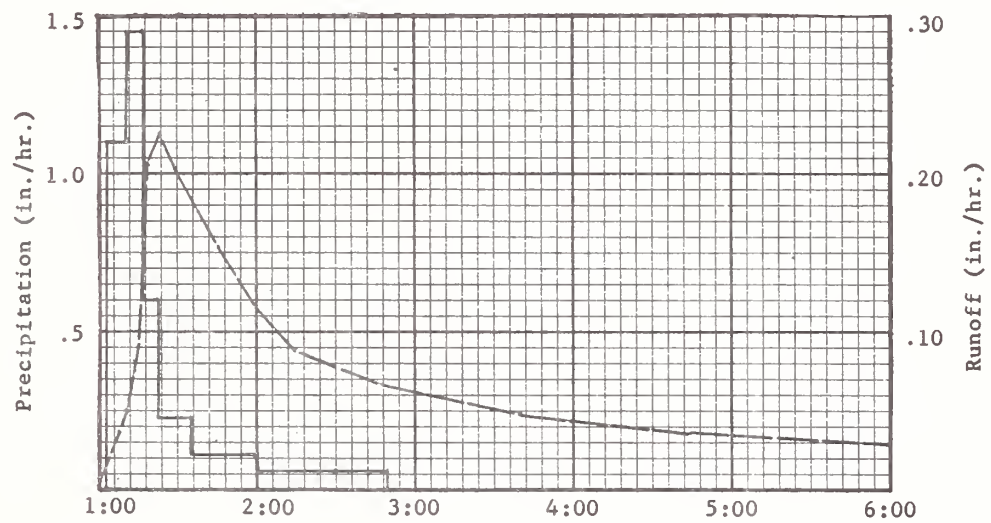
Notes: To convert runoff in in/hr to cfs, multiply by 83.6889



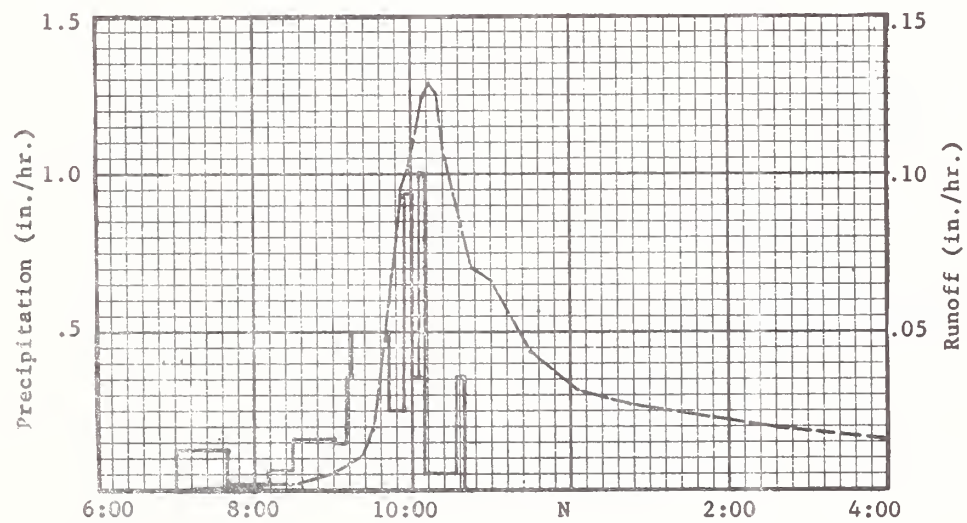
| Sebastopol, California                                                                                                                                                             |                      |                    | Watershed W-1 (52.1) |                      |                  | Area - 83 acres  |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                              |                      |                    | Rainfall             |                      |                  | Runoff           |                 |                  |
| Date                                                                                                                                                                               | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of April 17, 1942</b>                                                                                                                                                     |                      |                    |                      |                      |                  |                  |                 |                  |
| 3-18,28-42                                                                                                                                                                         | 0                    | 0.053              | 4-17-42              | Raingage             | S-6R             | 4-17-42          |                 |                  |
| 3-29                                                                                                                                                                               | .27                  | .005               | 7:00 a               | 0                    | 0                | 7:15 a           | 0               | 0                |
| 3-30,4-2                                                                                                                                                                           | 0                    | .019               | :40                  | .13                  | .09              | 8:30             | .0028           | .003             |
| 4-3                                                                                                                                                                                | .23                  | .005               | 8:10                 | .02                  | .10              | 9:00             | .0053           | .005             |
| 4-4                                                                                                                                                                                | .46                  | .005               | :30                  | .06                  | .12              | :19              | .0107           | .007             |
| 4-5                                                                                                                                                                                | .42                  | .038               | 9:00                 | .16                  | .20              | :31              | .0190           | .010             |
| 4-6                                                                                                                                                                                | .31                  | .021               | :08                  | .15                  | .22              | :52              | .0940           | .028             |
| 4-7,8                                                                                                                                                                              | 0                    | .048               | :13                  | .36                  | .25              | :57              | .1024           | .037             |
| 4-9                                                                                                                                                                                | .77                  | .051               | :43                  | .50                  | .50              | 10:04            | .1109           | .049             |
| 4-10                                                                                                                                                                               | 0                    | .102               | :55                  | .25                  | .55              | :10              | .1256           | .061             |
| 4-11                                                                                                                                                                               | 0                    | .026               | 10:00                | .84                  | .62              | :13              | .1287           | .068             |
| 4-12                                                                                                                                                                               | 0                    | .024               | :05                  | .36                  | .65              | :17              | .1256           | .076             |
| 4-13                                                                                                                                                                               | 1.15                 | .354               | :08                  | 1.00                 | .70              | :24              | .1080           | .090             |
| 4-14                                                                                                                                                                               | .10                  | .181               | :20                  | .05                  | .71              | :45              | .0708           | .121             |
| 4-15                                                                                                                                                                               | 0                    | .062               | :33                  | .05                  | .72              | 11:00            | .0660           | .138             |
| 4-16                                                                                                                                                                               | .13                  | .060               | :38e                 | .36                  | .75              | :31              | .0439           | .167             |
| 4-17 to                                                                                                                                                                            |                      |                    |                      |                      |                  | 12:05 p          | .0322           | .188             |
| 7:00 a                                                                                                                                                                             | 0                    | .053               |                      |                      |                  | :45              | .0270           | .207             |
| <b>Watershed Conditions:</b><br>15.6% apple orchard cultivated in<br>general across slope with volun-<br>teer cover crop during winter.<br>84.4% pasture with good grass<br>cover. |                      |                    |                      |                      |                  | 2:45             | .0190           | .254             |
|                                                                                                                                                                                    |                      |                    |                      |                      |                  | 7:45             | .0107           | .328             |
|                                                                                                                                                                                    |                      |                    |                      |                      |                  |                  |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 83.6889                                                                                                                      |                      |                    |                      |                      |                  |                  |                 |                  |



April 3, 1941 am

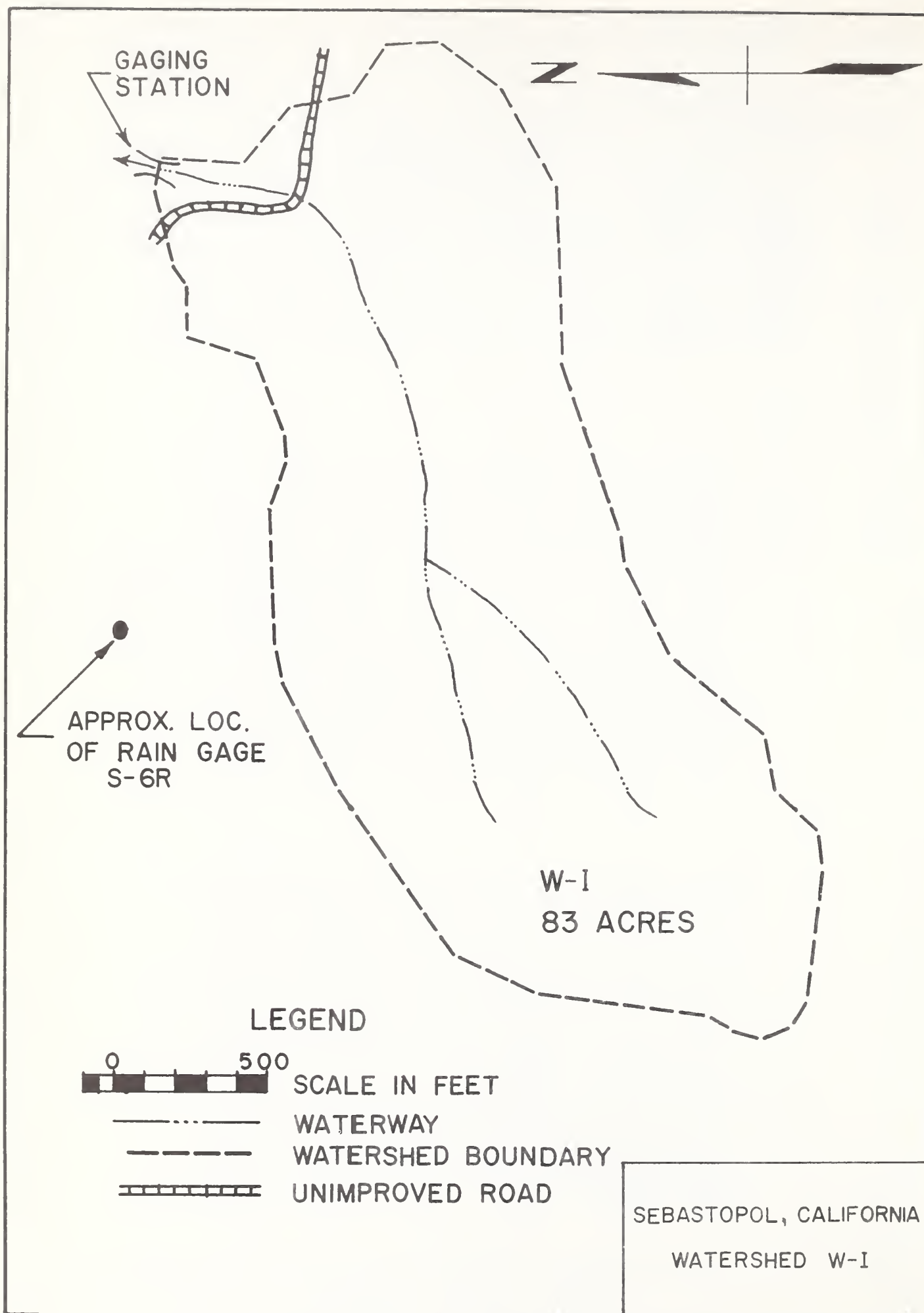


February 2, 1942 am



April 17, 1942

SEBASTOPOL, CALIFORNIA WATERSHED W-1



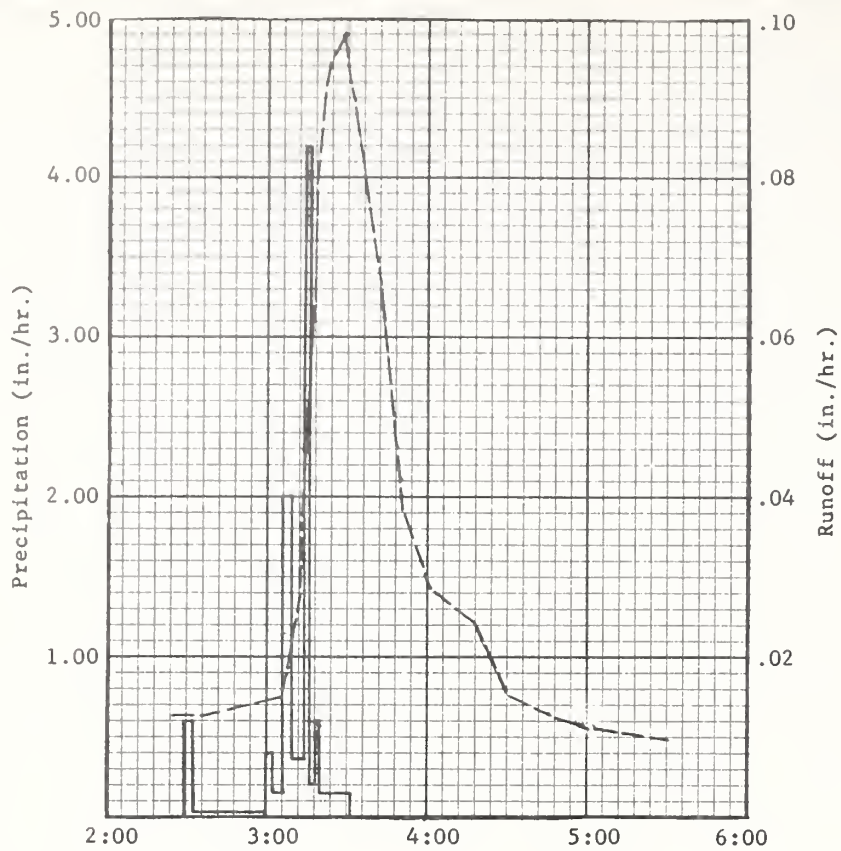
| Watsonville, California                                                                        |                   |                 | Watershed W-3 (54.3) |                   |               | Area - 27.4 acres |              |               |
|------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                          |                   |                 | Rainfall             |                   |               | Runoff            |              |               |
| Date                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of January 5, 1941                                                                       |                   |                 |                      |                   |               |                   |              |               |
| 12-15-40                                                                                       | 0.18              | 0               | 1-5-41               | Raingage          | R-6           | 1-5-41            |              |               |
| 12-16                                                                                          | .65               | 0               | 2:29 a               | 0                 | 0             | 2:25 a            | 0.013        | 0             |
| 12-17,20                                                                                       | .77               | 0               | :32                  | .60               | .03           | :35               | .013         | .002          |
| 12-21                                                                                          | 1.21              | 0               | :59                  | .02               | .04           | 3:05              | .015         | .009          |
| 12-22                                                                                          | 1.45              | 0               | 3:02                 | .40               | .06           | :12               | .028         | .012          |
| 12-23                                                                                          | .45               | 0               | :06                  | .15               | .07           | :13               | .036         | .012          |
| 12-24                                                                                          | .45               | .002            | :09                  | 2.00              | .17           | :17               | .064         | .015          |
| 12-25                                                                                          | .42               | .002            | :14                  | .36               | .20           | :18               | .078         | .017          |
| 12-26                                                                                          | 1.84              | .002            | :15                  | 4.20              | .27           | :21               | .091         | .021          |
| 12-27                                                                                          | 1.46              | .154            | :18                  | .20               | .28           | :23               | .095         | .024          |
| 12-28                                                                                          | .11               | .093            | :19                  | .60               | .29           | :28               | .098         | .032          |
| 12-29                                                                                          | .01               | .008            | :32e                 | .14               | .32           | :31               | .092         | .037          |
| 1-1-41                                                                                         | 0                 | .019            |                      |                   |               | :32               | .090         | .038          |
| 1-2                                                                                            | 0                 | .014            |                      |                   |               | :42               | .067         | .049          |
| 1-3                                                                                            | .34               | .033            |                      |                   |               | :52               | .038         | .057          |
| 1-4                                                                                            | .14               | .018            |                      |                   |               | 4:02              | .028         | .063          |
| 1-5 to                                                                                         |                   |                 |                      |                   |               | :17               | .024         | .069          |
| 2:25 a                                                                                         | .44               | .041            |                      |                   |               | :29               | .016         | .072          |
| Watershed Conditions:                                                                          |                   |                 |                      |                   |               | :46               | .013         | .077          |
| 97.5% pasture with good grass cover and 2.5% of crop land in rotation of small grain and idle. |                   |                 |                      |                   |               | 5:00              | .011         | .079          |
|                                                                                                |                   |                 |                      |                   |               | :30               | .010         | .085          |
| Event of February 16, 1941                                                                     |                   |                 |                      |                   |               |                   |              |               |
| 1-17,18-41                                                                                     | 0                 | 0.189           | 2-16-41              | Raingage          | R-6           | 2-16-41           |              |               |
| 1-19                                                                                           | 1.52              | .539            | 3:58 p               | 0                 | 0             | 3:58 p            | 0.004        | 0             |
| 1-20                                                                                           | 0                 | .310            | 4:06                 | 1.20              | .06           | 4:05              | .005         | .001          |
| 1-21                                                                                           | .69               | .475            | :11                  | .60               | .11           | :10               | .008         | .001          |
| 1-22                                                                                           | .44               | .435            | :21                  | .30               | .16           | :13               | .011         | .002          |
| 1-23                                                                                           | 1.12              | .882            | :27                  | .20               | .18           | :17               | .017         | .003          |
| 1-24                                                                                           | .49               | .451            | :47                  | 0                 | .18           | :22               | .023         | .004          |
| 1-25                                                                                           | 1.28              | .830            | :50                  | .20               | .19           | :25               | .024         | .005          |
| 1-26                                                                                           | .17               | .673            | 5:05                 | 0                 | .19           | :28               | .024         | .007          |
| 1-27                                                                                           | 0                 | .222            | :10e                 | .12               | .20           | :32               | .024         | .008          |
| 1-28                                                                                           | 0                 | .160            |                      |                   |               | :35               | .021         | .009          |
| 1-29                                                                                           | 0                 | .133            |                      |                   |               | :42               | .016         | .012          |
| 1-30                                                                                           | 0                 | .103            |                      |                   |               | :50               | .012         | .013          |
| 1-31                                                                                           | 0                 | .082            |                      |                   |               | :57               | .011         | .015          |
| 2-1,4                                                                                          | 0                 | .221            |                      |                   |               | 5:02              | .011         | .016          |
| 2-5                                                                                            | .60               | .077            |                      |                   |               | :20               | .010         | .019          |
| 2-6                                                                                            | .33               | .109            |                      |                   |               | :30               | .009         | .020          |
| 2-7                                                                                            | .09               | .061            |                      |                   |               | :45               | .008         | .022          |
| 2-8                                                                                            | 1.78              | .706            |                      |                   |               | 6:00              | .007         | .024          |
| 2-9                                                                                            | 3.25              | 3.062           |                      |                   |               | :30               | .006         | .027          |
| 2-10                                                                                           | .29               | .611            |                      |                   |               | :45               | .006         | .029          |
| 2-11                                                                                           | 1.10              | .928            |                      |                   |               | 7:45              | .006         | .035          |
| 2-12,13                                                                                        | 0                 | .497            |                      |                   |               |                   |              |               |
| 2-14                                                                                           | .12               | .135            |                      |                   |               |                   |              |               |
| 2-15                                                                                           | .06               | .125            |                      |                   |               |                   |              |               |
| 2-16 to                                                                                        |                   |                 |                      |                   |               |                   |              |               |
| 3:58 p                                                                                         | 0                 | .063            |                      |                   |               |                   |              |               |
| Watershed Conditions:                                                                          |                   |                 |                      |                   |               |                   |              |               |
| 97.5% pasture with good grass cover and 2.5% of crop land in rotation of small grain and idle. |                   |                 |                      |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 27.6274                                  |                   |                 |                      |                   |               |                   |              |               |



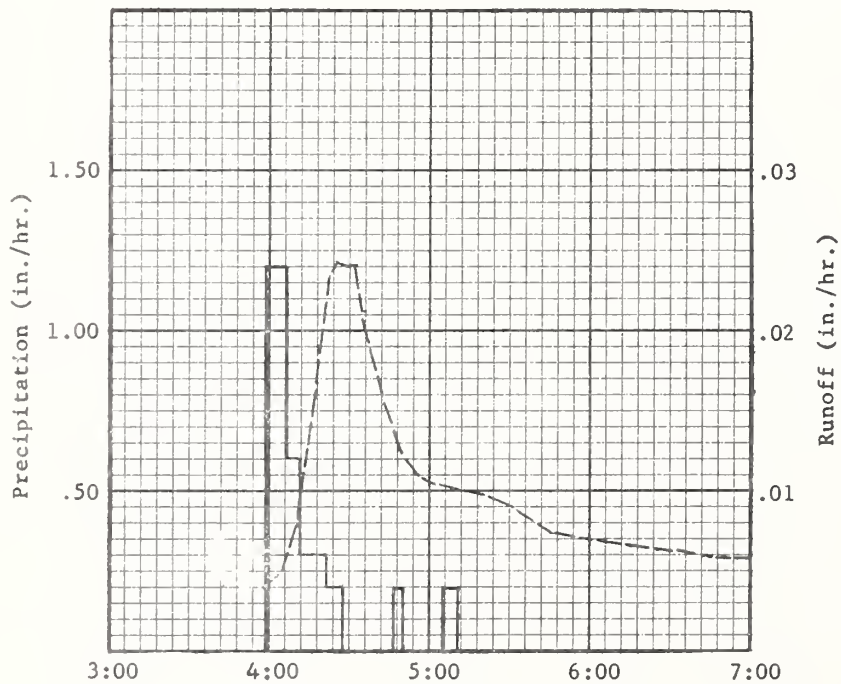
| Watsonville, California                                                                                                             |                      |                    | Watershed W-3 (54.3) |                      |                  | Area - 27.4 acres |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                               |                      |                    | Rainfall             |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensit,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of April 1, 1941                                                                                                              |                      |                    |                      |                      |                  |                   |                 |                  |
| 3-2-41                                                                                                                              | 0.51                 | 0.567              | 4-1-41               | Raingage             | R-6              | 4-1-41            |                 |                  |
| 3-3                                                                                                                                 | .60                  | .561               | 4:11 p               | 0                    | 0                | 4:15 p            | 0.009           | 0                |
| 3-4                                                                                                                                 | .07                  | .242               | :22                  | .11                  | .02              | :23               | .010            | .001             |
| 3-5                                                                                                                                 | 0                    | .184               | :28                  | .50                  | .07              | :28               | .012            | .002             |
| 3-6                                                                                                                                 | 0                    | .151               | :37                  | .07                  | .08              | :40               | .023            | .006             |
| 3-7                                                                                                                                 | 0                    | .121               | :39                  | .60                  | .10              | :43               | .026            | .007             |
| 3-8                                                                                                                                 | 0                    | .094               | :45                  | .20                  | .12              | :48               | .029            | .009             |
| 3-9                                                                                                                                 | 0                    | .072               | 5:16                 | .04                  | .14              | :58               | .029            | .014             |
| 3-10                                                                                                                                | 0                    | .060               | :21                  | .48                  | .18              | 5:04              | .026            | .017             |
| 3-11                                                                                                                                | 0                    | .051               | :33                  | .10                  | .20              | :13               | .022            | .021             |
| 3-12                                                                                                                                | .27                  | .115               | :35                  | .60                  | .22              | :18               | .022            | .022             |
| 3-13                                                                                                                                | .28                  | .072               | :39                  | .15                  | .23              | :23               | .023            | .023             |
| 3-14                                                                                                                                | .18                  | .079               | :54                  | .08                  | .25              | :36               | .029            | .029             |
| 3-15                                                                                                                                | 0                    | .037               | 6:09                 | .24                  | .31              | :42               | .034            | .032             |
| 3-16                                                                                                                                | 0                    | .023               | :20                  | .44                  | .39              | :46               | .039            | .033             |
| 3-17                                                                                                                                | 0                    | .014               | :32                  | .05                  | .40              | :50               | .041            | .036             |
| 3-18                                                                                                                                | 0                    | .009               | :34                  | 2.10                 | .47              | 6:00              | .043            | .043             |
| 3-19                                                                                                                                | 0                    | .007               | 7:04                 | .24                  | .59              | :04               | .045            | .046             |
| 3-20                                                                                                                                | 0                    | .005               | :19e                 | .08                  | .61              | :09               | .049            | .050             |
| 3-21                                                                                                                                | 0                    | .004               |                      |                      |                  | :24               | .078            | .066             |
| 3-22                                                                                                                                | 0                    | .003               |                      |                      |                  | :27               | .080            | .070             |
| 3-23                                                                                                                                | 0                    | .003               |                      |                      |                  | :32               | .080            | .077             |
| 3-24                                                                                                                                | 0                    | .002               |                      |                      |                  | :38               | .101            | .086             |
| 3-25                                                                                                                                | 0                    | .002               |                      |                      |                  | :48               | .147            | .106             |
| 3-26                                                                                                                                | 0                    | .001               |                      |                      |                  | :50               | .147            | .111             |
| 3-27                                                                                                                                | 0                    | .001               |                      |                      |                  | :55               | .143            | .123             |
| 3-28                                                                                                                                | .98                  | .056               |                      |                      |                  | 7:15              | .105            | .164             |
| 3-29                                                                                                                                | .49                  | .054               |                      |                      |                  | :27               | .078            | .182             |
| 3-30                                                                                                                                | .97                  | .098               |                      |                      |                  | :39               | .056            | .196             |
| 3-31                                                                                                                                | 1.37                 | .065               |                      |                      |                  | :51               | .043            | .206             |
| 4-1 to                                                                                                                              |                      |                    |                      |                      |                  | 8:10              | .034            | .217             |
| 4:11 p                                                                                                                              | .17                  | .199               |                      |                      |                  | :25               | .032            | .225             |
| <u>Watershed Conditions:</u><br>97.5% pasture with good grass<br>cover and 2.5% of crop land in<br>rotation of small grain and idle |                      |                    |                      |                      |                  | :45               | .029            | .235             |
|                                                                                                                                     |                      |                    |                      |                      |                  | 9:00              | .027            | .242             |
|                                                                                                                                     |                      |                    |                      |                      |                  | :45               | .026            | .261             |
|                                                                                                                                     |                      |                    |                      |                      |                  | :57               | .024            | .266             |
|                                                                                                                                     |                      |                    |                      |                      |                  | 10:45             | .023            | .285             |
| Notes: To convert runoff in in/hr to cfs, multiply by 27.6274                                                                       |                      |                    |                      |                      |                  |                   |                 |                  |

| Watsonville, California                                                                                                       |                      |                    | Watershed W-3 (54.3)      |                      |                  | Area - 27.4 acres |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                         |                      |                    | Rainfall                  |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                          | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time          | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| 1-7-42                                                                                                                        | 0.26                 | 0.048              | Event of February 6, 1942 |                      |                  |                   |                 |                  |
| 1-8                                                                                                                           | 0                    | .046               | 2-6-42                    | Raingage             | R-6              | 2-6-42            |                 |                  |
| 1-9                                                                                                                           | 0                    | .025               | 2:50 a                    | 0                    | 0                | 2:50 a            | 0.014           | 0                |
| 1-10                                                                                                                          | 0                    | .022               | 3:10                      | .03                  | .01              | 3:00              | .015            | .002             |
| 1-11                                                                                                                          | 0                    | .020               | :22                       | .10                  | .03              | :07               | .016            | .004             |
|                                                                                                                               |                      |                    | :24                       | .60                  | .05              | :17               | .018            | .007             |
| 1-12                                                                                                                          | 0                    | .018               | :42                       | .20                  | .11              | :25               | .022            | .009             |
| 1-13                                                                                                                          | 0                    | .015               | :48                       | .10                  | .12              | :37               | .030            | .015             |
| 1-14                                                                                                                          | 0                    | .014               | :50                       | .30                  | .13              | :40               | .034            | .016             |
| 1-15                                                                                                                          | .02                  | .014               | :53                       | 0                    | .13              | :42               | .034            | .017             |
| 1-16                                                                                                                          | 0                    | .012               | :58                       | .24                  | .15              | :45               | .037            | .019             |
| 1-17                                                                                                                          | 0                    | .011               | 4:01                      | .60                  | .18              | :48               | .037            | .021             |
| 1-18                                                                                                                          | 0                    | .009               | :13                       | .30                  | .24              | 4:00              | .041            | .029             |
| 1-19                                                                                                                          | 0                    | .008               | :20                       | .17                  | .26              | :05               | .045            | .032             |
| 1-20                                                                                                                          | 0                    | .006               | :25                       | .12                  | .27              | :15               | .064            | .041             |
| 1-21                                                                                                                          | .12                  | .005               | :30                       | .48                  | .31              | :27               | .086            | .056             |
| 1-22                                                                                                                          | .43                  | .021               | :34                       | .60                  | .35              | :31               | .093            | .062             |
| 1-23                                                                                                                          | 1.00                 | .108               | :35                       | 2.40                 | .39              | :33               | .099            | .066             |
| 1-24                                                                                                                          | 2.22                 | 1.444              | :46                       | .20                  | .42              | :36               | .105            | .071             |
| 1-25                                                                                                                          | .19                  | .447               | :50                       | .15                  | .43              | :42               | .151            | .084             |
| 1-26                                                                                                                          | .36                  | .252               | :54                       | 0                    | .43              | :43               | .160            | .086             |
| 1-27                                                                                                                          | .42                  | .373               | :57                       | .20                  | .44              | :47               | .180            | .097             |
| 1-28                                                                                                                          | .02                  | .532               | 5:06                      | .07                  | .45              | :51               | .170            | .109             |
| 1-29                                                                                                                          | 0                    | .120               | :20                       | .13                  | .48              | :55               | .151            | .120             |
| 1-30                                                                                                                          | .23                  | .107               | :26                       | 0                    | .48              | 5:02              | .120            | .136             |
| 1-31                                                                                                                          | 0                    | .091               | :37e                      | .11                  | .50              | :08               | .101            | .147             |
| 2-1                                                                                                                           | .60                  | .122               |                           |                      |                  | :13               | .093            | .155             |
| 2-2                                                                                                                           | .28                  | .318               |                           |                      |                  | :18               | .086            | .162             |
| 2-3                                                                                                                           | .24                  | .205               |                           |                      |                  | :30               | .074            | .178             |
| 2-4                                                                                                                           | 1.20                 | .707               |                           |                      |                  | :39               | .068            | .189             |
| 2-5                                                                                                                           | 1.03                 | .994               |                           |                      |                  | 6:00              | .049            | .208             |
| 2-6 to                                                                                                                        |                      |                    |                           |                      |                  | :06               | .045            | .213             |
| 2:50 a                                                                                                                        | 0                    | .041               |                           |                      |                  | :15               | .041            | .220             |
| Watershed Conditions:<br>97.5% pasture with good grass<br>cover and 2.5% of crop land in<br>rotation of small grain and idle. |                      |                    |                           |                      |                  | :35               | .036            | .232             |
|                                                                                                                               |                      |                    |                           |                      |                  | :40               | .034            | .235             |
|                                                                                                                               |                      |                    |                           |                      |                  | :45               | .034            | .238             |
|                                                                                                                               |                      |                    |                           |                      |                  | 7:00              | .030            | .246             |
|                                                                                                                               |                      |                    |                           |                      |                  | :25               | .029            | .258             |
|                                                                                                                               |                      |                    |                           |                      |                  | 8:00              | .027            | .274             |
|                                                                                                                               |                      |                    |                           |                      |                  | 9:15              | .024            | .306             |
|                                                                                                                               |                      |                    |                           |                      |                  | :40               | .023            | .316             |
|                                                                                                                               |                      |                    |                           |                      |                  | 10:05             | .022            | .325             |

Notes: To convert runoff in in/hr to cfs, multiply by 27.6274

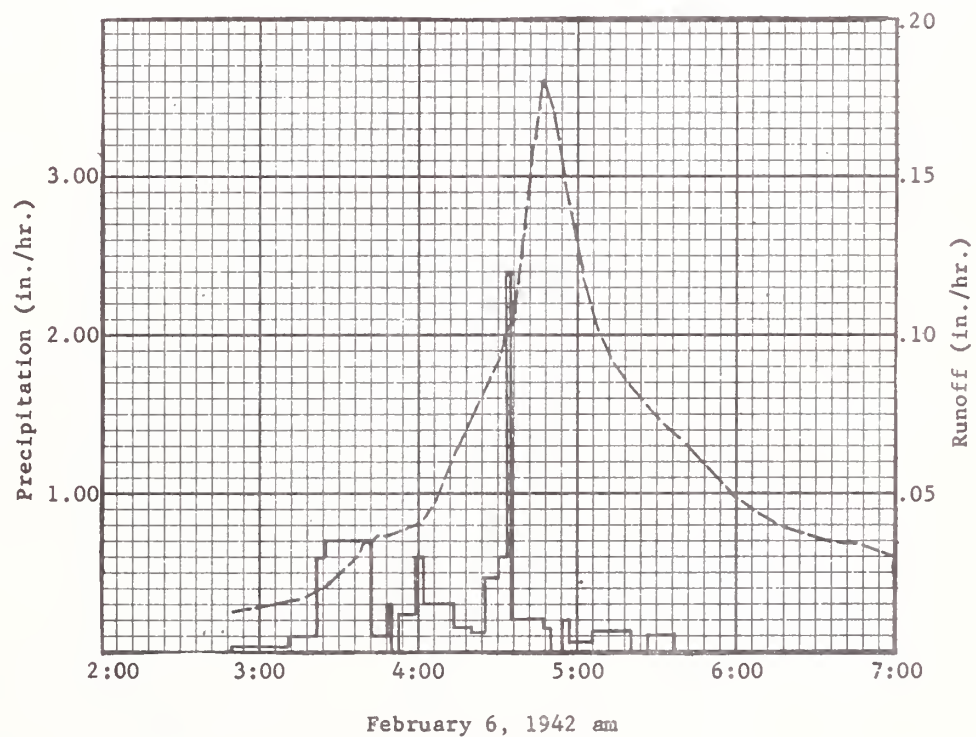
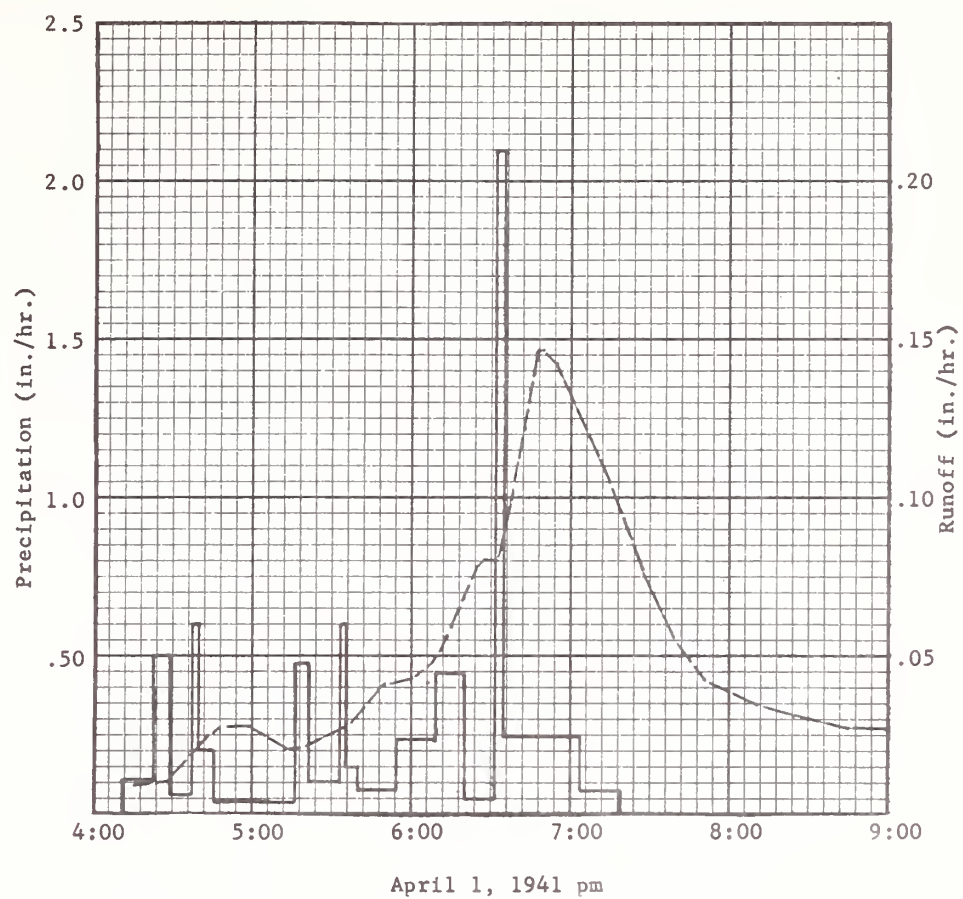


January 5, 1941 am



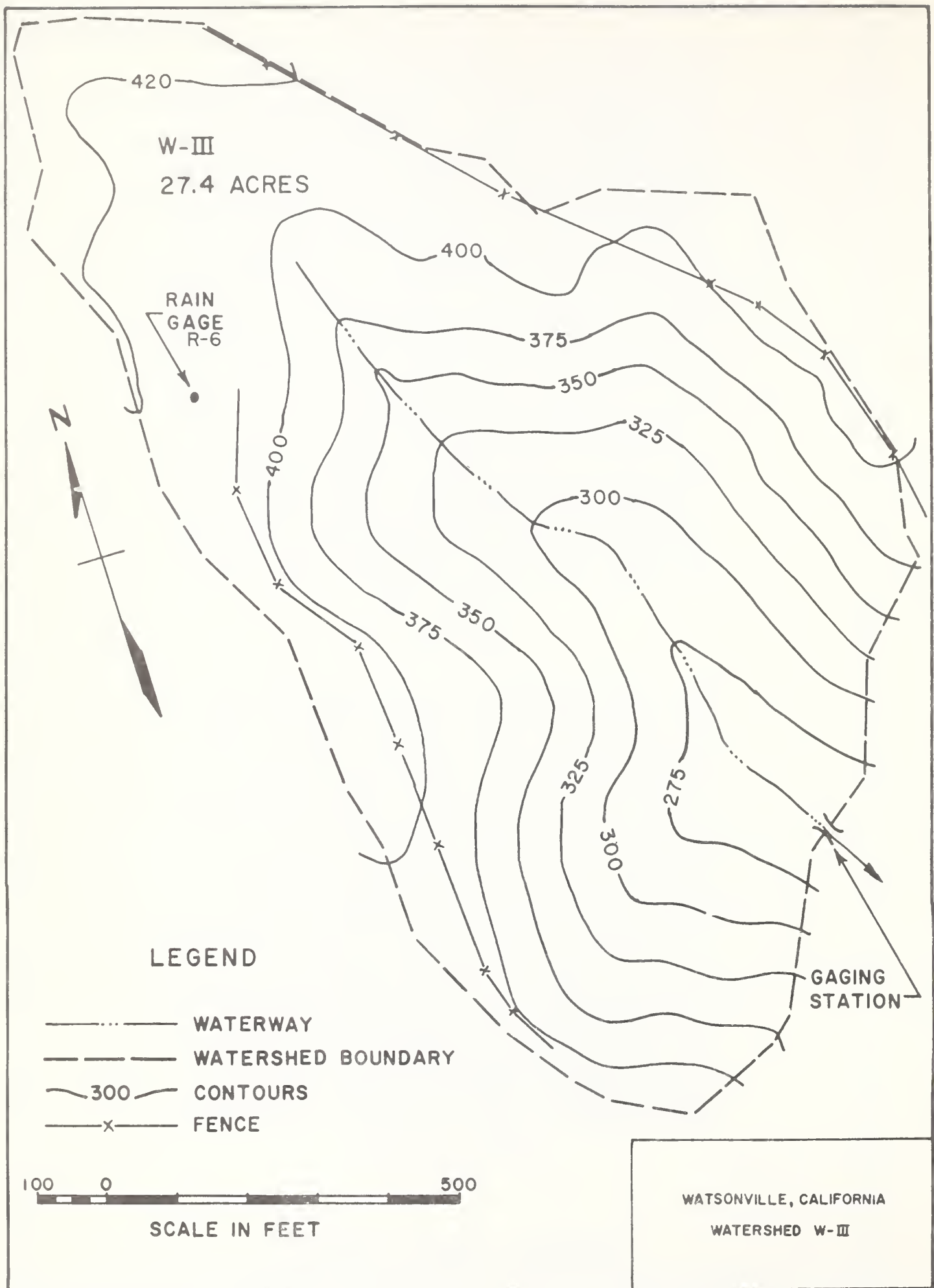
February 16, 1941 pm

WATSONVILLE, CALIFORNIA WATERSHED W-3



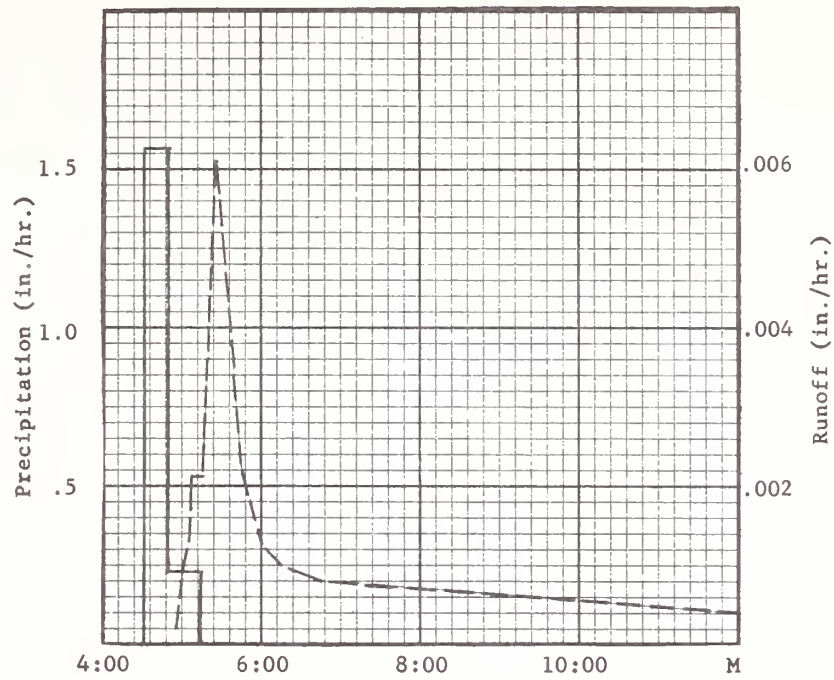
WATSONVILLE, CALIFORNIA WATERSHED W-3



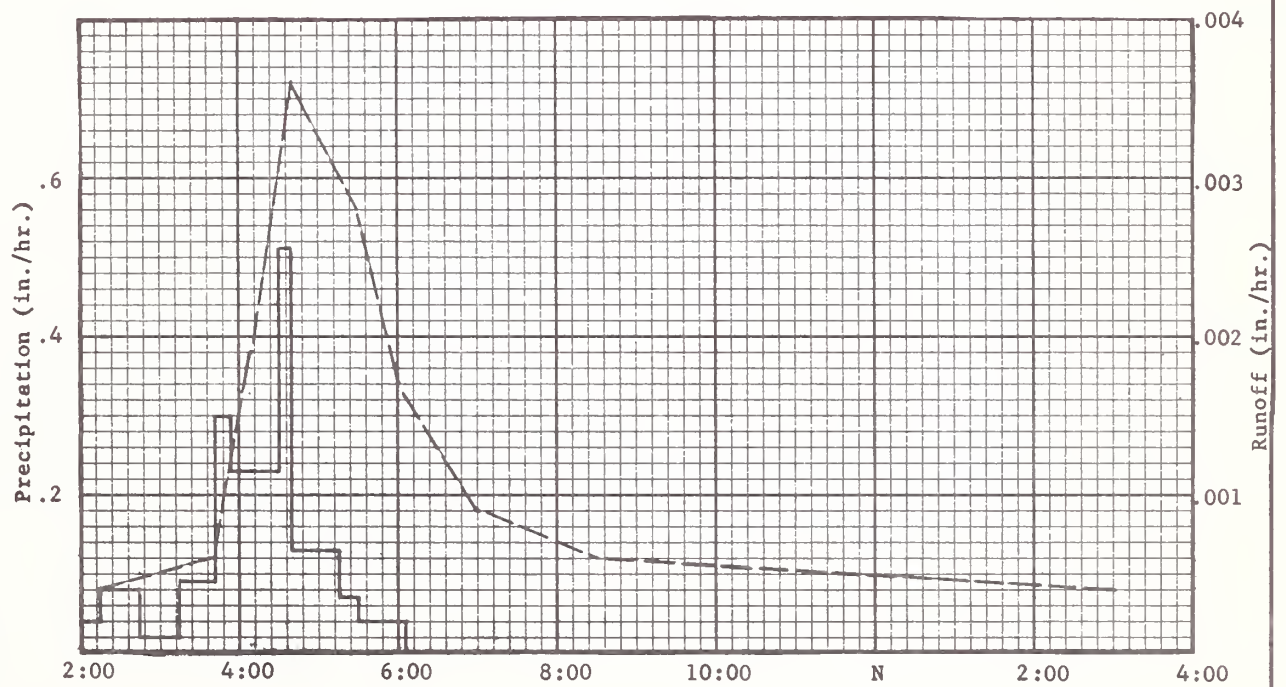


| Emmett, Idaho                                                                                                  |                   |                 | Watershed W-2 (55.2) |                   |               | Area - 69.4 acres |              |               |
|----------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                          |                   |                 | Rainfall             |                   |               | Runoff            |              |               |
| Date                                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of May 12, 1940                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| 4-12-40                                                                                                        | 0                 | 0.087           | 5-12-40              | Raingage          | R-4           | 5-12-40           |              |               |
| 4-13                                                                                                           | 0                 | .078            | 4:37 p               | 0                 | 0             | 4:55 p            | 0            | 0             |
| 4-14                                                                                                           | 0                 | .072            | :50                  | 1.57              | .34           | 5:00              | .001         | 0             |
| 4-15                                                                                                           | .18               | .066            | 5:13e                | .23               | .43           | :05               | .001         | 0             |
| 4-16                                                                                                           | 0                 | .058            |                      |                   |               | :08               | .002         | 0             |
| 4-17                                                                                                           | 0                 | .055            |                      |                   |               | :15               | .002         | 0             |
| 4-18                                                                                                           | 0                 | .052            |                      |                   |               | :20               | .004         | .001          |
| 4-19                                                                                                           | 0                 | .048            |                      |                   |               | :27               | .006         | .001          |
| 4-20                                                                                                           | .20               | .047            |                      |                   |               | :30               | .005         | .002          |
| 4-21                                                                                                           | 0                 | .042            |                      |                   |               | :45               | .002         | .003          |
| 4-22                                                                                                           | 0                 | .038            |                      |                   |               | 6:00              | .001         | .003          |
| 4-23                                                                                                           | 0                 | .036            |                      |                   |               | :15               | .001         | .003          |
| 4-24                                                                                                           | 0                 | .034            |                      |                   |               | :45               | .001         | .004          |
| 4-25                                                                                                           | 0                 | .032            |                      |                   |               |                   |              |               |
| 4-26                                                                                                           | .03               | .032            |                      |                   |               |                   |              |               |
| 4-27                                                                                                           | .05               | .032            |                      |                   |               |                   |              |               |
| 4-28                                                                                                           | .23               | .033            |                      |                   |               |                   |              |               |
| 4-29, 5-3                                                                                                      | 0                 | .154            |                      |                   |               |                   |              |               |
| 5-4                                                                                                            | .04               | .026            |                      |                   |               |                   |              |               |
| 5-5, 11                                                                                                        | 0                 | .052            |                      |                   |               |                   |              |               |
| 5-12 to 4:50 p                                                                                                 | 0                 | .004            |                      |                   |               |                   |              |               |
| Watershed Conditions:                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| Watershed area was 85% pasture and range land, 15% was cultivated in either grass and legumes or winter wheat. |                   |                 |                      |                   |               |                   |              |               |
| Event of May 14, 1941                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| 4-14, 25-41                                                                                                    | 0                 | 0.197           | 5-14-41              | Raingage          | R-4           | 5-14-41           |              |               |
| 4-26                                                                                                           | .03               | .013            | 2:00 a               | 0                 | 0             | 2:15 a            | 0            | 0             |
| 4-27                                                                                                           | 0                 | .013            | :15                  | .04               | .01           | 3:40              | .001         | .001          |
| 4-28                                                                                                           | 0                 | .012            | :45                  | .08               | .05           | 4:10              | .002         | .001          |
| 4-29                                                                                                           | 0                 | .011            | 3:14                 | .02               | .06           | :40               | .004         | .003          |
| 4-30                                                                                                           | 0                 | .011            | :41                  | .09               | .10           | :50               | .004         | .003          |
| 5-1                                                                                                            | .07               | .011            | :55                  | .30               | .17           | 5:30              | .003         | .005          |
| 5-2                                                                                                            | .17               | .010            | 4:31                 | .23               | .31           | 6:00              | .002         | .007          |
| 5-3                                                                                                            | .50               | .019            | :38                  | .51               | .37           | 7:00              | .001         | .008          |
| 5-4                                                                                                            | .16               | .012            | 5:15                 | .13               | .45           | 8:30              | .001         | .009          |
| 5-5                                                                                                            | .16               | .010            | :33                  | .07               | .47           |                   |              |               |
| 5-6                                                                                                            | 0                 | .007            | 6:05e                | .04               | .49           |                   |              |               |
| 5-7                                                                                                            | .08               | .008            |                      |                   |               |                   |              |               |
| 5-8                                                                                                            | .03               | .008            |                      |                   |               |                   |              |               |
| 5-9                                                                                                            | 0                 | .007            |                      |                   |               |                   |              |               |
| 5-10                                                                                                           | 0                 | .007            |                      |                   |               |                   |              |               |
| 5-11                                                                                                           | 0                 | .006            |                      |                   |               |                   |              |               |
| 5-12                                                                                                           | .10               | .006            |                      |                   |               |                   |              |               |
| 5-13                                                                                                           | .44               | .011            |                      |                   |               |                   |              |               |
| 5-14 to 2:15 a                                                                                                 | 0                 | .001            |                      |                   |               |                   |              |               |
| Watershed Conditions:                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| Watershed area was 85% pasture and range land, 15% was cultivated in either grass and legumes or winter wheat. |                   |                 |                      |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 69.97602                                                 |                   |                 |                      |                   |               |                   |              |               |

| Emmett, Idaho                                                                                                                           |                      |                    | Watershed W-2 (55.2) |                      |                  | Area - 69.4 acres |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                   |                      |                    | Rainfall             |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                                    | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of June 18, 1941                                                                                                                  |                      |                    |                      |                      |                  |                   |                 |                  |
| 5-19,22-41                                                                                                                              | 0                    | 0.012              | 6-18-41              | Raingage             | R-4              | 6-18-41           |                 |                  |
| 5-23                                                                                                                                    | .26                  | .004               | 7:02 a               | 0                    | 0                | 7:00 a            | 0               | 0                |
| 5-24                                                                                                                                    | .41                  | .009               | :04                  | 1.80                 | .06              | :10               | .003            | 0                |
| 5-25,26                                                                                                                                 | 0                    | .014               | :08                  | 2.70                 | .24              | :20               | .008            | .001             |
| 5-27                                                                                                                                    | .12                  | .007               | :09                  | 1.80                 | .27              | :35               | .003            | .003             |
| 5-28                                                                                                                                    | 0                    | .007               | :11                  | .60                  | .29              | :45               | .002            | .003             |
| 5-29                                                                                                                                    | .07                  | .007               | :47                  | 0                    | .29              | 12:00 N           | .001            | .010             |
| 5-30                                                                                                                                    | .22                  | .009               | :57                  | .36                  | .35              | 1:30 p            | .001            | .012             |
| 5-31                                                                                                                                    | 0                    | .010               | 8:05                 | .22                  | .38              | 6:00              | .001            | .017             |
| 6-1                                                                                                                                     | 0                    | .008               | :30                  | .10                  | .42              | 12:00 M           | .001            | .022             |
| 6-2                                                                                                                                     | 0                    | .007               | 9:13                 | .03                  | .44              |                   |                 |                  |
| 6-3                                                                                                                                     | .07                  | .007               | :30                  | .11                  | .47              |                   |                 |                  |
| 6-4                                                                                                                                     | 0                    | .006               | :45e                 | .08                  | .49              |                   |                 |                  |
| 6-5                                                                                                                                     | 0                    | .005               |                      |                      |                  |                   |                 |                  |
| 6-6                                                                                                                                     | .75                  | .013               |                      |                      |                  |                   |                 |                  |
| 6-7                                                                                                                                     | 1.34                 | .029               |                      |                      |                  |                   |                 |                  |
| 6-8                                                                                                                                     | .07                  | .015               |                      |                      |                  |                   |                 |                  |
| 6-9,12                                                                                                                                  | 0                    | .037               |                      |                      |                  |                   |                 |                  |
| 6-13                                                                                                                                    | .15                  | .009               |                      |                      |                  |                   |                 |                  |
| 6-14,16                                                                                                                                 | 0                    | .021               |                      |                      |                  |                   |                 |                  |
| 6-17                                                                                                                                    | .14                  | .007               |                      |                      |                  |                   |                 |                  |
| 6-18 to<br>7:00 a                                                                                                                       | 0                    | .010               |                      |                      |                  |                   |                 |                  |
| Watershed Conditions:<br>Watershed area was 85% pasture and range land, 15% was cultivated in either grass and legumes or winter wheat. |                      |                    |                      |                      |                  |                   |                 |                  |
| Event of June 19, 1941                                                                                                                  |                      |                    |                      |                      |                  |                   |                 |                  |
| 5-20,22-41                                                                                                                              | 0                    | 0.009              | 6-19-41              | Raingage             | R-4              | 6-19-41           |                 |                  |
| 5-23                                                                                                                                    | .26                  | .004               | 3:30 a               | 0                    | 0                | 3:25 a            | 0.001           | 0                |
| 5-24                                                                                                                                    | .41                  | .009               | :34                  | .75                  | .05              | :40               | .003            | .001             |
| 5-25,26                                                                                                                                 | 0                    | .014               | :39                  | 2.16                 | .23              | :50               | .011            | .002             |
| 5-27                                                                                                                                    | .12                  | .007               | :46                  | .34                  | .27              | :55               | .011            | .003             |
| 5-28                                                                                                                                    | 0                    | .007               | :50                  | .75                  | .32              | 4:10              | .005            | .005             |
| 5-29                                                                                                                                    | .07                  | .007               | :52                  | .60                  | .34              | :30               | .003            | .006             |
| 5-30                                                                                                                                    | .22                  | .009               | 4:00                 | .10                  | .35              | 7:00              | .002            | .012             |
| 5-31,6-2                                                                                                                                | 0                    | .024               | :20                  | .18                  | .41              | 12:00 N           | .001            | .020             |
| 6-3                                                                                                                                     | .07                  | .007               | :40                  | .12                  | .45              |                   |                 |                  |
| 6-4                                                                                                                                     | 0                    | .006               | 5:05e                | 0                    | .45              |                   |                 |                  |
| 6-5                                                                                                                                     | 0                    | .005               |                      |                      |                  |                   |                 |                  |
| 6-6                                                                                                                                     | .75                  | .013               |                      |                      |                  |                   |                 |                  |
| 6-7                                                                                                                                     | 1.34                 | .029               |                      |                      |                  |                   |                 |                  |
| 6-8                                                                                                                                     | .07                  | .015               |                      |                      |                  |                   |                 |                  |
| 6-9,12                                                                                                                                  | 0                    | .037               |                      |                      |                  |                   |                 |                  |
| 6-13                                                                                                                                    | .15                  | .009               |                      |                      |                  |                   |                 |                  |
| 6-14,16                                                                                                                                 | 0                    | .021               |                      |                      |                  |                   |                 |                  |
| 6-17                                                                                                                                    | .14                  | .007               |                      |                      |                  |                   |                 |                  |
| 6-18                                                                                                                                    | .55                  | .024               |                      |                      |                  |                   |                 |                  |
| 6-19 to<br>3:30 a                                                                                                                       | 0                    | .034               |                      |                      |                  |                   |                 |                  |
| Watershed Conditions:<br>Same as above.                                                                                                 |                      |                    |                      |                      |                  |                   |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 69.97602                                                                          |                      |                    |                      |                      |                  |                   |                 |                  |



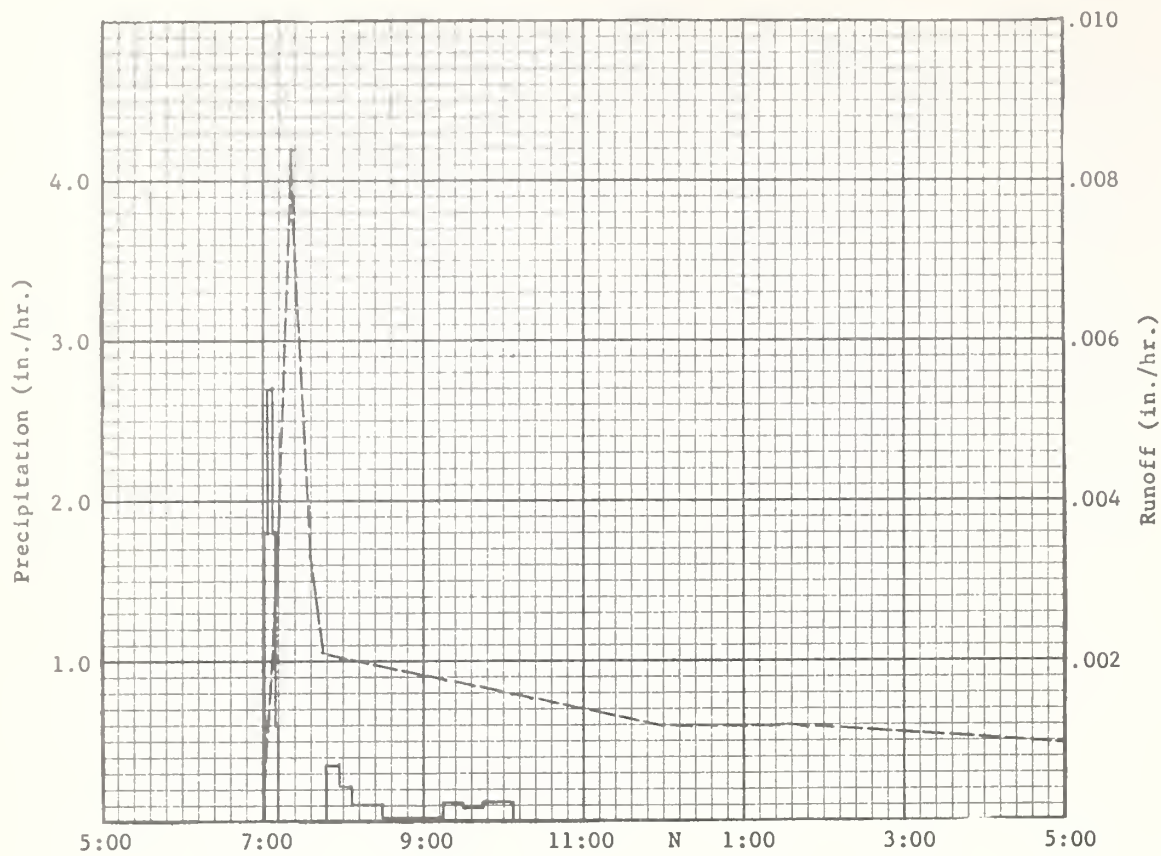
May 12, 1940 pm



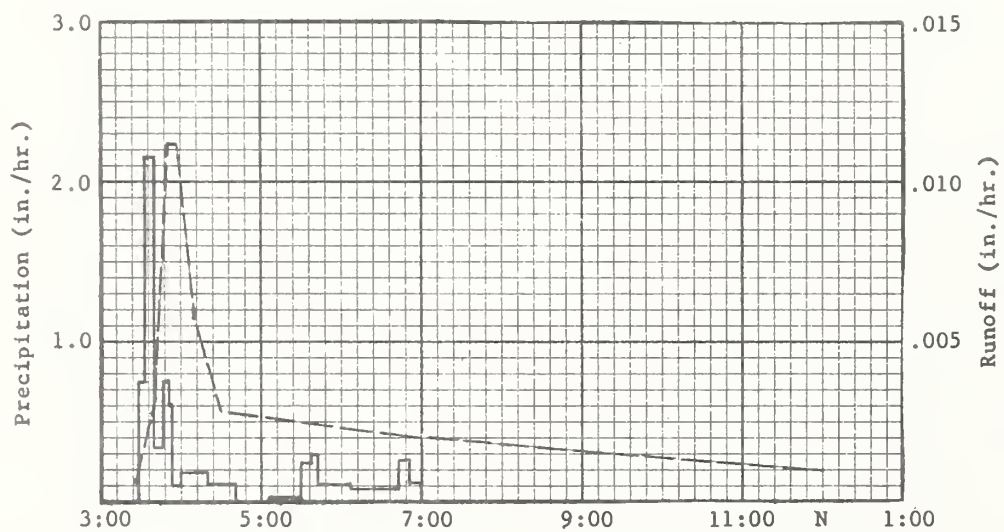
May 14, 1941

EMMETT, IDAHO WATERSHED W-2



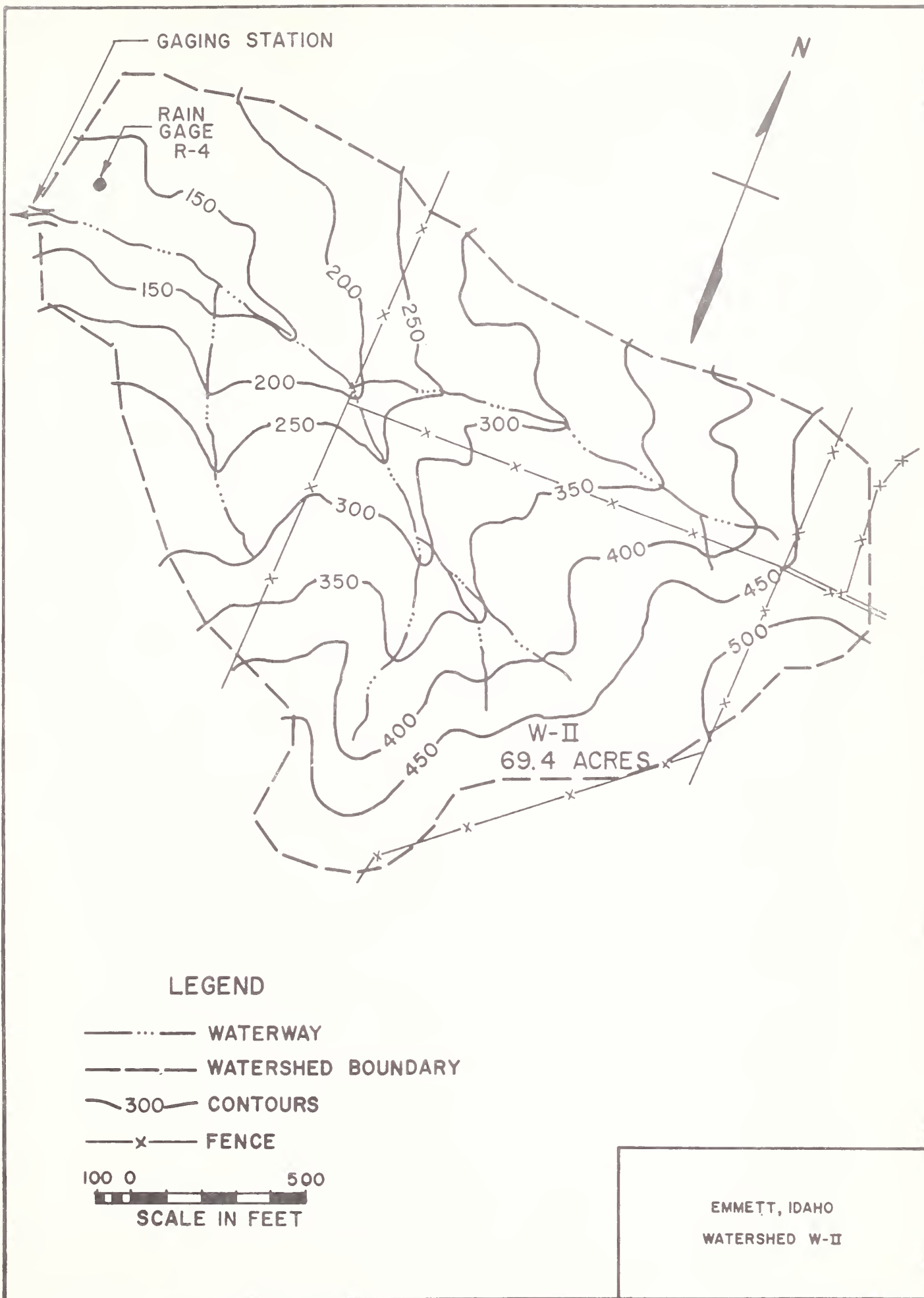


June 18, 1941



June 19, 1941 am

EMMETT, IDAHO WATERSHED W-2

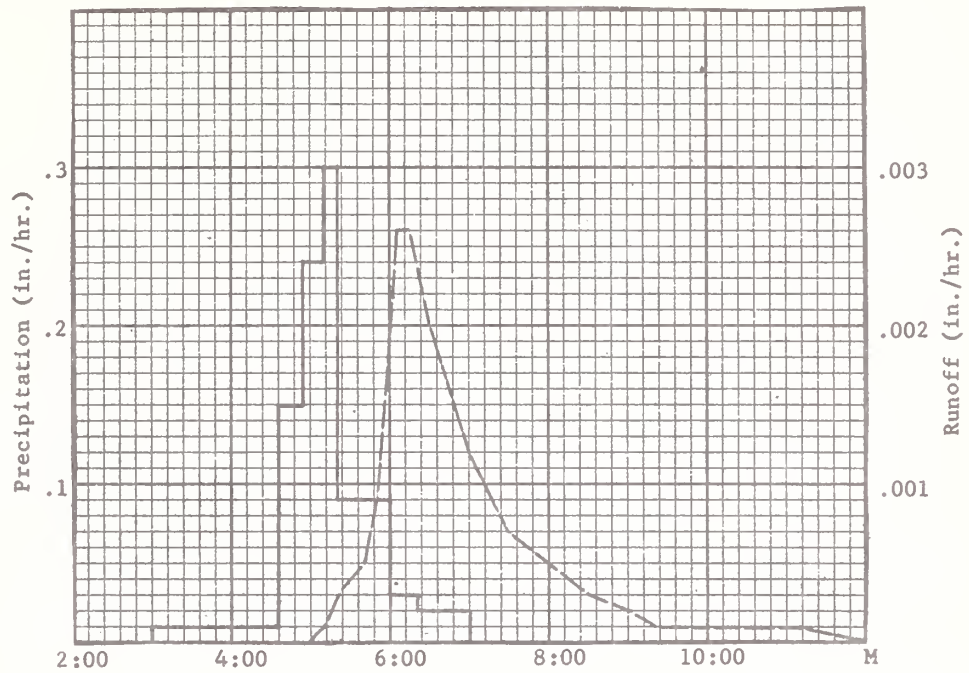




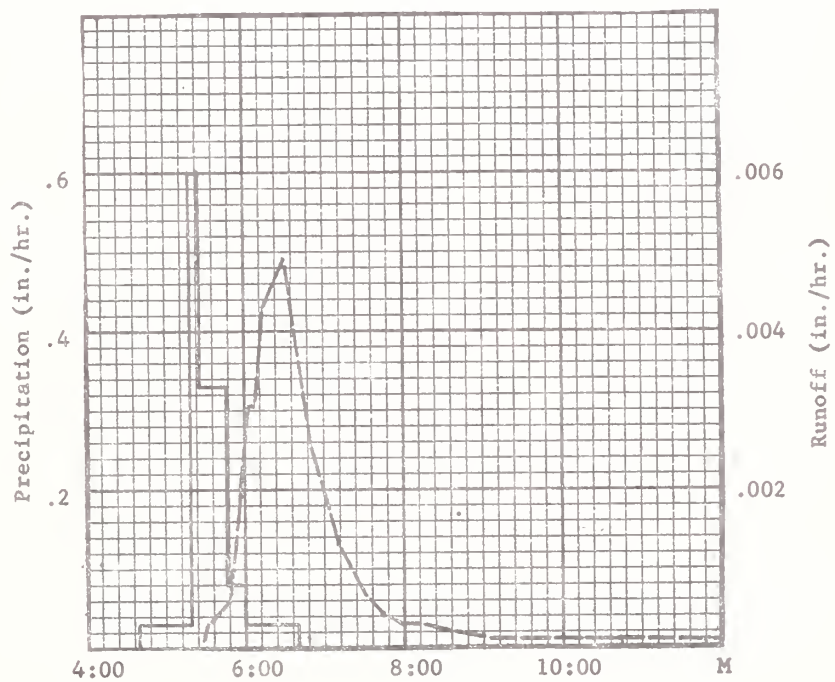
| Moscow, Idaho                                                                                                                                                                                                                        |                   |                 | Watershed W-1 (56.1) |                   |               | Area - 146.8 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                |                   |                 | Rainfall             |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                                                                 | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| Event of October 29, 1940                                                                                                                                                                                                            |                   |                 |                      |                   |               |                    |              |               |
| 9-30-40                                                                                                                                                                                                                              | 0.42              | 0               | 10-29-40             | Raingage          | R-1           | 10-29-40           |              |               |
| 10-1                                                                                                                                                                                                                                 | .23               | 0               | 3:00 p               | 0                 | 0             | 5:00 p             | 0            | 0             |
| 10-2                                                                                                                                                                                                                                 | .02               | 0               | 4:35                 | .01               | .02           | :10                | .0001        | 0             |
| 10-3                                                                                                                                                                                                                                 | 1.73              | .014            | :55                  | .15               | .07           | :20                | .0003        | 0             |
| 10-4                                                                                                                                                                                                                                 | .16               | .002            | 5:10                 | .24               | .13           | :40                | .0005        | .0001         |
| 10-11                                                                                                                                                                                                                                | .16               | 0               | :20                  | .30               | .18           | :50                | .0009        | .0002         |
| 10-13                                                                                                                                                                                                                                | .03               | 0               | 6:00                 | .09               | .24           | 6:00               | .0019        | .0004         |
| 10-20                                                                                                                                                                                                                                | .23               | 0               | :20                  | .03               | .25           | :05                | .0026        | .0006         |
| 10-23                                                                                                                                                                                                                                | .09               | 0               | 7:00e                | .02               | .26           | :15                | .0026        | .0010         |
| 10-24                                                                                                                                                                                                                                | .43               | 0               |                      |                   |               | :30                | .0020        | .0016         |
| 10-26                                                                                                                                                                                                                                | .50               | .003            |                      |                   |               | 7:00               | .0012        | .0024         |
| 10-27                                                                                                                                                                                                                                | .30               | .005            |                      |                   |               | :30                | .0007        | .0029         |
| 10-28                                                                                                                                                                                                                                | .08               | 0               |                      |                   |               | 8:30               | .0003        | .0034         |
| 10-29 to                                                                                                                                                                                                                             |                   |                 |                      |                   |               | 9:00               | .0002        | .0035         |
| 3:00 p                                                                                                                                                                                                                               | .06               | .0002           |                      |                   |               | :20                | .0001        | .0036         |
| Watershed Conditions:                                                                                                                                                                                                                |                   |                 |                      |                   |               | 10:00              | .0001        | .0037         |
| 33% of area in winter wheat. 21.5% in peas, 15.08% in peas and sweet clover, 6.8% in sweet clover, 15.6% in oats, 7.06% in winter barley, .96% native grass and brush. Winter wheat seeded prior to 10/15/39.                        |                   |                 |                      |                   |               | 11:10              | .0001        | .0038         |
| Event of April 9, 1941                                                                                                                                                                                                               |                   |                 |                      |                   |               |                    |              |               |
| 3-10-41                                                                                                                                                                                                                              | 0                 | 0.005           | 4-9-41               | Raingage          | R-1           | 4-9-41             |              |               |
| 3-11,16                                                                                                                                                                                                                              | 0                 | .014            | 4:40 p               | 0                 | 0             | 5:28 p             | 0.0001       | 0             |
| 3-17                                                                                                                                                                                                                                 | .02               | .002            | 5:20                 | .03               | .02           | :32                | .0003        | 0             |
| 3-18                                                                                                                                                                                                                                 | .02               | .001            | :25                  | .60               | .07           | :48                | .0006        | .0001         |
| 3-19,21                                                                                                                                                                                                                              | .02               | .003            | :45                  | .33               | .18           | :56                | .0020        | .0003         |
| 3-22                                                                                                                                                                                                                                 | .46               | .015            | 6:00                 | .08               | .20           | 6:04               | .0035        | .0007         |
| 3-23                                                                                                                                                                                                                                 | .03               | .007            | :40e                 | .03               | .22           | :07                | .0035        | .0009         |
| 3-24,29                                                                                                                                                                                                                              | 0                 | .008            |                      |                   |               | :15                | .0043        | .0014         |
| 3-30                                                                                                                                                                                                                                 | .05               | .001            |                      |                   |               | :30                | .0049        | .0026         |
| 3-31                                                                                                                                                                                                                                 | 0                 | .001            |                      |                   |               | :50                | .0026        | .0039         |
| 4-1                                                                                                                                                                                                                                  | .11               | 0               |                      |                   |               | 7:10               | .0013        | .0045         |
| 4-2                                                                                                                                                                                                                                  | .43               | .015            |                      |                   |               | :30                | .0007        | .0048         |
| 4-3                                                                                                                                                                                                                                  | .23               | .015            |                      |                   |               | :45                | .0004        | .0049         |
| 4-4                                                                                                                                                                                                                                  | 0                 | .004            |                      |                   |               | :58                | .0003        | .0050         |
| 4-5                                                                                                                                                                                                                                  | 0                 | .002            |                      |                   |               | 8:10               | .0003        | .0051         |
| 4-6                                                                                                                                                                                                                                  | 0                 | .001            |                      |                   |               | :35                | .0002        | .0052         |
| Watershed Conditions:                                                                                                                                                                                                                |                   |                 |                      |                   |               | 9:05               | .0001        | .0053         |
| 42% of watershed area in peas just coming through ground, 24.3% in sweet clover about 5" high covering about 1/3 of surface; 31% in winter wheat and 1.7% in spring wheat offering no protection, and 96% in native grass and brush. |                   |                 |                      |                   |               | :50                | .0001        | .0054         |
|                                                                                                                                                                                                                                      |                   |                 |                      |                   |               | 10:40              | .0001        | .0055         |
|                                                                                                                                                                                                                                      |                   |                 |                      |                   |               | 12:00 M            | .0001        | .0056         |
| Notes: To convert runoff in in/hr to cfs, multiply by 148.01844                                                                                                                                                                      |                   |                 |                      |                   |               |                    |              |               |



| Moscow, Idaho                                                                                                                                                                                                             |                      |                    | Watershed W-1 (56.1) |                       |                  | Area - 146.8 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|-----------------------|------------------|--------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                     |                      |                    | Rainfall             |                       |                  | Runoff             |                 |                  |
| Date                                                                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time   | Rate<br>(in/hr) | Acc.<br>(inches) |
| <b>Event of April 25, 1941</b>                                                                                                                                                                                            |                      |                    |                      |                       |                  |                    |                 |                  |
| 3-26-41                                                                                                                                                                                                                   | 0                    | 0.001              | 4-25-41              | Raingage              | R-1              | 4-25-41            |                 |                  |
| 3-27,29                                                                                                                                                                                                                   | 0                    | .003               | 4:05 p               | 0                     | 0                | 5:25 p             | 0.0001          | 0                |
| 3-30                                                                                                                                                                                                                      | .05                  | .001               | :09                  | .45                   | .03              | :26                | .0001           | 0                |
| 3-31                                                                                                                                                                                                                      | 0                    | .001               | :11                  | 2.10                  | .10              | :27                | .0005           | 0                |
| 4-1                                                                                                                                                                                                                       | .11                  | 0                  | :14                  | .80                   | .14              | :30                | .0008           | 0                |
| 4-2                                                                                                                                                                                                                       | .43                  | .015               | :20                  | .30                   | .17              | :35                | .0009           | .0001            |
| 4-3                                                                                                                                                                                                                       | .23                  | .015               | 5:00                 | .03                   | .19              | :45                | .0007           | .0002            |
| 4-4                                                                                                                                                                                                                       | 0                    | .004               | 6:00e                | .01                   | .20              | :55                | .0005           | .0003            |
| 4-5                                                                                                                                                                                                                       | 0                    | .002               |                      |                       |                  | 6:10               | .0003           | .0004            |
| 4-6                                                                                                                                                                                                                       | 0                    | .001               |                      |                       |                  | :25                | .0002           | .0005            |
| 4-9                                                                                                                                                                                                                       | .23                  | .006               |                      |                       |                  | :40                | .0001           | .0005            |
| 4-10                                                                                                                                                                                                                      | 1.01                 | .010               |                      |                       |                  | :55                | .0001           | .0005            |
| 4-11                                                                                                                                                                                                                      | .10                  | .050               |                      |                       |                  | 7:20               | .0001           | .0005            |
| 4-12                                                                                                                                                                                                                      | 0                    | .011               |                      |                       |                  |                    |                 |                  |
| 4-13                                                                                                                                                                                                                      | 0                    | .007               |                      |                       |                  |                    |                 |                  |
| 4-14                                                                                                                                                                                                                      | 0                    | .003               |                      |                       |                  |                    |                 |                  |
| 4-15                                                                                                                                                                                                                      | 0                    | .002               |                      |                       |                  |                    |                 |                  |
| 4-16                                                                                                                                                                                                                      | 0                    | .002               |                      |                       |                  |                    |                 |                  |
| 4-17                                                                                                                                                                                                                      | 0                    | .002               |                      |                       |                  |                    |                 |                  |
| 4-18                                                                                                                                                                                                                      | 0                    | .001               |                      |                       |                  |                    |                 |                  |
| 4-19                                                                                                                                                                                                                      | 0                    | .001               |                      |                       |                  |                    |                 |                  |
| 4-25 to<br>4:05 p                                                                                                                                                                                                         | 0                    | .0001              |                      |                       |                  |                    |                 |                  |
| <b>Watershed Conditions:</b><br>42% of watershed area was in peas<br>about 1" high, 24.34% in sweet<br>clover about 6" high, 31% in win-<br>ter wheat and 1.7% in spring<br>wheat. .96% was in native grass<br>and brush. |                      |                    |                      |                       |                  |                    |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 148.01844                                                                                                                                                           |                      |                    |                      |                       |                  |                    |                 |                  |

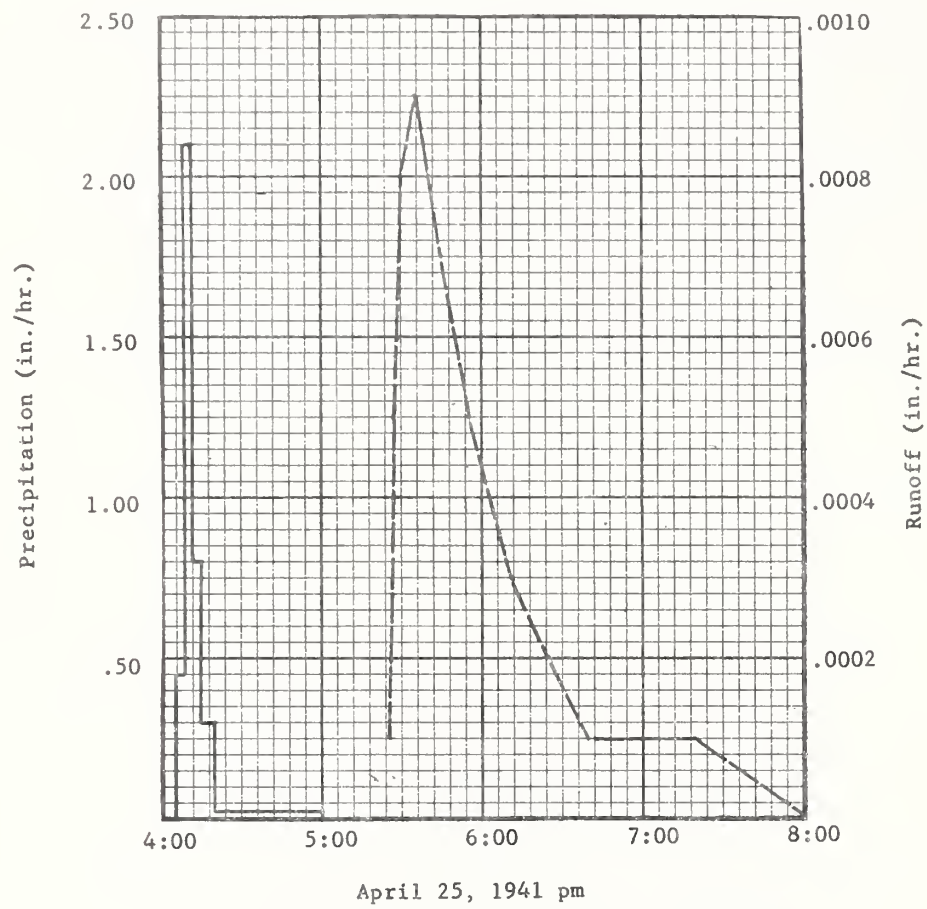


October 29, 1940 pm

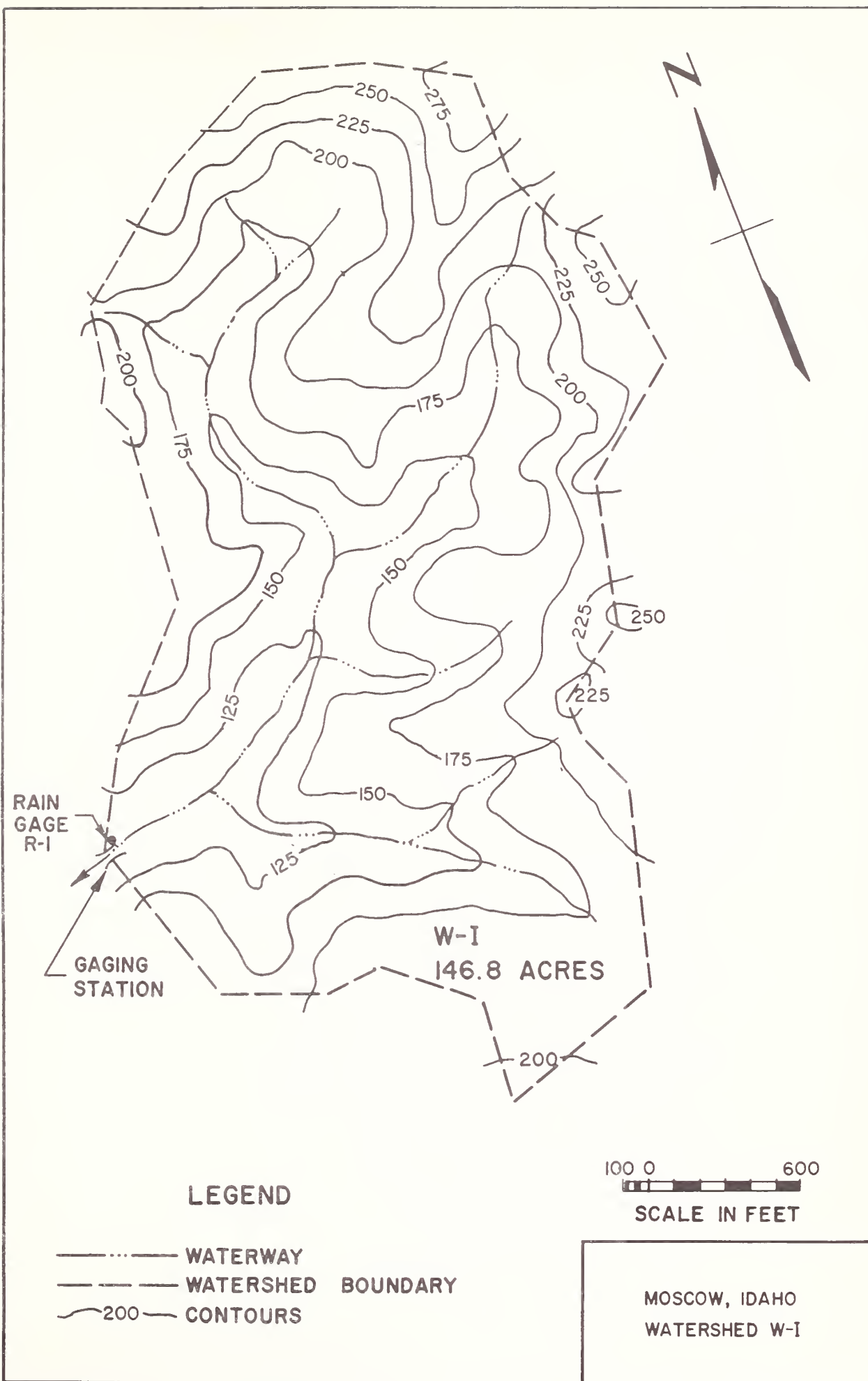


April 9, 1941 pm

MOSCOW, IDAHO WATERSHED W-1



MOSCOW, IDAHO WATERSHED W-1



**LEGEND**

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100 0 600  
SCALE IN FEET

MOSCOW, IDAHO  
WATERSHED W-I





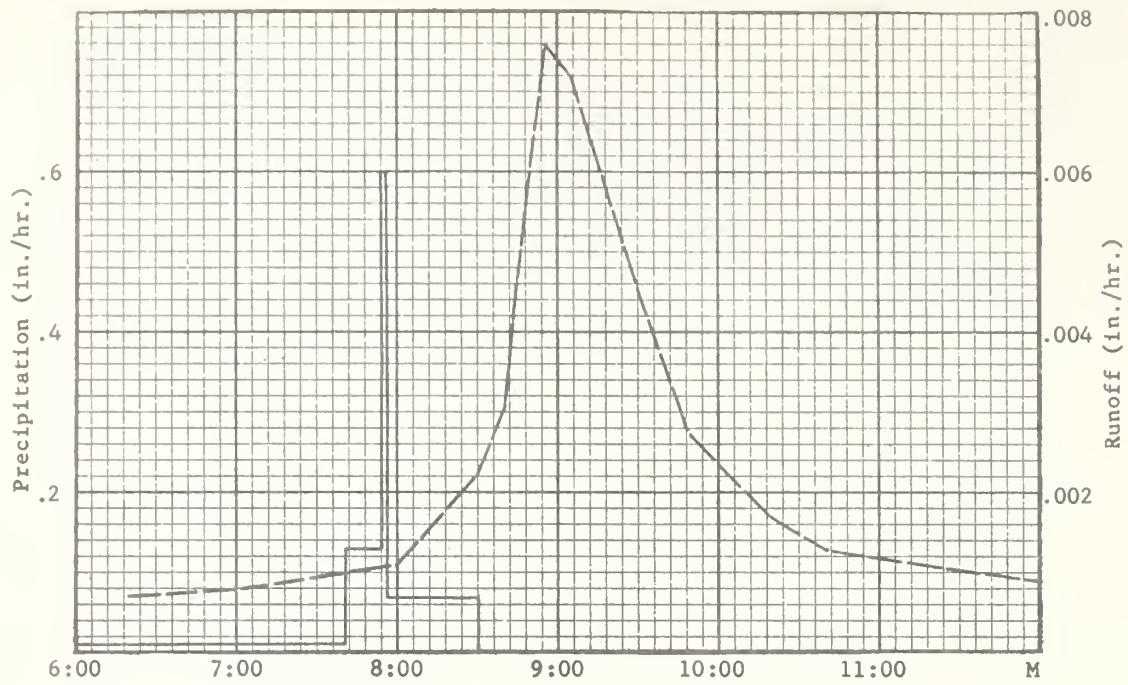
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| Moscow, Idaho                                                                                                                                                      |                   |                 | Watershed W-2 (56.2) |                   |               | Area - 177.9 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                              |                   |                 | Rainfall             |                   |               | Runoff             |              |               |
| Date                                                                                                                                                               | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| Event of March 26, 1940                                                                                                                                            |                   |                 |                      |                   |               |                    |              |               |
| 2-25-40                                                                                                                                                            | 0.65              | 0.198           | 3-26-40              | Raingage          | R-2           | 3-26-40            |              |               |
| 2-26                                                                                                                                                               | .37               | .227            | 6:00 p               | 0                 | 0             | 6:20 p             | 0.0007       | 0             |
| 2-27                                                                                                                                                               | .21               | .179            | 7:40                 | .01               | .02           | 7:00               | .0008        | .0005         |
| 2-28                                                                                                                                                               | .47               | .258            | :54                  | .13               | .05           | 8:00               | .0011        | .0015         |
| 2-29                                                                                                                                                               | .01               | .103            | :56                  | .60               | .07           | :30                | .0022        | .0023         |
| 3-1                                                                                                                                                                | .22               | .090            | 8:30e                | .07               | .11           | :40                | .0031        | .0027         |
| 3-2                                                                                                                                                                | .36               | .221            |                      |                   |               | :45                | .0046        | .0030         |
| 3-3                                                                                                                                                                | 0 *               | .069            |                      |                   |               | :55                | .0076        | .0040         |
| 3-4                                                                                                                                                                | .05*              | .055            |                      |                   |               | 9:05               | .0072        | .0052         |
| 3-5                                                                                                                                                                | .04*              | .053            |                      |                   |               | :30                | .0046        | .0077         |
| 3-6                                                                                                                                                                | 0 *               | .033            |                      |                   |               | :50                | .0027        | .0089         |
| 3-7                                                                                                                                                                | .81               | .264            |                      |                   |               | 10:20              | .0017        | .0100         |
| 3-8                                                                                                                                                                | .01               | .089            |                      |                   |               | :40                | .0013        | .0105         |
| 3-9                                                                                                                                                                | 0 *               | .061            |                      |                   |               | 12:00 M            | .0009        | .0120         |
| 3-10                                                                                                                                                               | 0 *               | .043            |                      |                   |               |                    |              |               |
| 3-11                                                                                                                                                               | .04*              | .038            |                      |                   |               |                    |              |               |
| 3-12                                                                                                                                                               | 0 *               | .030            |                      |                   |               |                    |              |               |
| 3-13                                                                                                                                                               | 0 *               | .023            |                      |                   |               |                    |              |               |
| 3-14                                                                                                                                                               | 0 *               | .018            |                      |                   |               |                    |              |               |
| 3-15                                                                                                                                                               | 0 *               | .013            |                      |                   |               |                    |              |               |
| 3-16                                                                                                                                                               | .12*              | .023            |                      |                   |               |                    |              |               |
| 3-17                                                                                                                                                               | 0 *               | .010            |                      |                   |               |                    |              |               |
| 3-18                                                                                                                                                               | 0 *               | .008            |                      |                   |               |                    |              |               |
| 3-19                                                                                                                                                               | 0 *               | .006            |                      |                   |               |                    |              |               |
| 3-20                                                                                                                                                               | 0 *               | .004            |                      |                   |               |                    |              |               |
| 3-21                                                                                                                                                               | 0 *               | .003            |                      |                   |               |                    |              |               |
| 3-22, 24                                                                                                                                                           | 0 *               | .006            |                      |                   |               |                    |              |               |
| 3-25                                                                                                                                                               | .53               | .034            |                      |                   |               |                    |              |               |
| 3-26 to 6:00 p                                                                                                                                                     | .05               | .011            |                      |                   |               |                    |              |               |
| Watershed Conditions:<br>51% of watershed in oats, 7.3% in alfalfa, 16.5% in winter wheat, 11.7% in weeds, 7.5% sweet clover 4.5% spring wheat, and 1.5% in grass. |                   |                 |                      |                   |               |                    |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 179.37657<br>*Estimated from record at R-1 on W-1                                                            |                   |                 |                      |                   |               |                    |              |               |

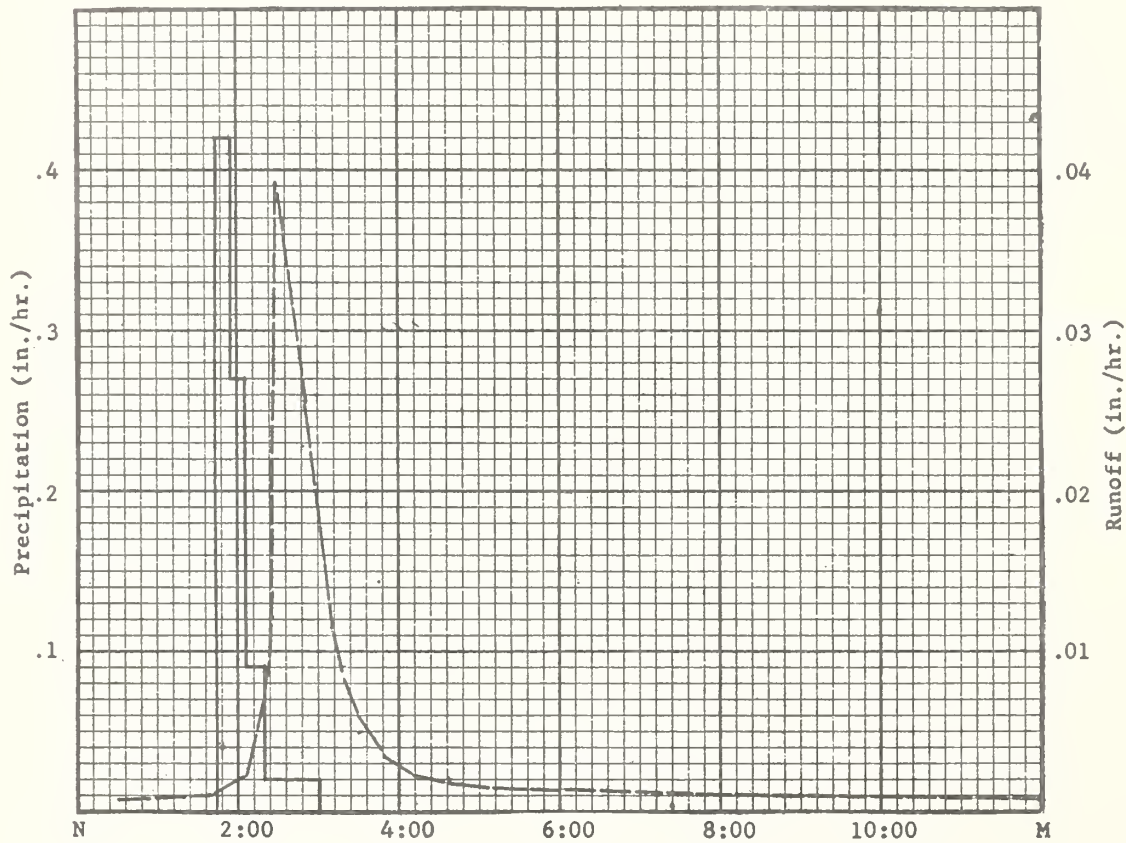
| Moscow, Idaho                                                                                                                                                             |                      |                    | Watershed W-2 (56.2) |                       |                  | Area - 177.9 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|-----------------------|------------------|--------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                     |                      |                    | Rainfall             |                       |                  | Runoff             |                 |                  |
| Date                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time   | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of April 9, 1940                                                                                                                                                    |                      |                    |                      |                       |                  |                    |                 |                  |
| 3-10-40                                                                                                                                                                   | 0 *                  | 0.043              | 4-9-40               | Raingage              | R-2              | 4-9-40             |                 |                  |
| 3-11                                                                                                                                                                      | 0 *                  | .038               | 1:45 p               | 0                     | 0                | 12:30 p            | 0.0007          | 0                |
| 3-12                                                                                                                                                                      | .04*                 | .030               | :55                  | .42                   | .07              | 1:40               | .0010           | .0010            |
| 3-13                                                                                                                                                                      | .12*                 | .023               | 2:06                 | .27                   | .05              | 2:05               | .0023           | .0016            |
| 3-14                                                                                                                                                                      | 0 *                  | .018               | :20                  | .09                   | .02              | :15                | .0052           | .0022            |
| 3-15                                                                                                                                                                      | 0 *                  | .013               | 3:00 e               | .02                   | .01              | :20                | .0069           | .0027            |
| 3-16                                                                                                                                                                      | .12*                 | .023               |                      |                       |                  | :24                | .0087           | .0032            |
| 3-17                                                                                                                                                                      | 0 *                  | .010               |                      |                       |                  | :26                | .0175           | .0037            |
| 3-18                                                                                                                                                                      | 0 *                  | .008               |                      |                       |                  | :30                | .0392           | .0055            |
| 3-19                                                                                                                                                                      | 0 *                  | .006               |                      |                       |                  | :50                | .0256           | .0161            |
| 3-20                                                                                                                                                                      | 0 *                  | .004               |                      |                       |                  | 3:00               | .0182           | .0197            |
| 3-21                                                                                                                                                                      | 0 *                  | .003               |                      |                       |                  | :10                | .0115           | .0222            |
| 3-22                                                                                                                                                                      | 0 *                  | .002               |                      |                       |                  | :20                | .0080           | .0238            |
| 3-23                                                                                                                                                                      | 0 *                  | .002               |                      |                       |                  | :30                | .0059           | .0250            |
| 3-24                                                                                                                                                                      | 0 *                  | .002               |                      |                       |                  | :50                | .0034           | .0265            |
| 3-25                                                                                                                                                                      | .53                  | .034               |                      |                       |                  | 4:10               | .0023           | .0274            |
| 3-26                                                                                                                                                                      | .16                  | .026               |                      |                       |                  | :40                | .0018           | .0284            |
| 3-27                                                                                                                                                                      | 0 *                  | .008               |                      |                       |                  | 5:10               | .0015           | .0292            |
| 3-28                                                                                                                                                                      | 0 *                  | .005               |                      |                       |                  | 6:00               | .0014           | .0304            |
| 3-29                                                                                                                                                                      | .05*                 | .010               |                      |                       |                  | 7:40               | .0011           | .0325            |
| 3-30                                                                                                                                                                      | .03*                 | .005               |                      |                       |                  |                    |                 |                  |
| 3-31                                                                                                                                                                      | .54                  | .056               |                      |                       |                  |                    |                 |                  |
| 4-1                                                                                                                                                                       | .02                  | .059               |                      |                       |                  |                    |                 |                  |
| 4-2                                                                                                                                                                       | 0 *                  | .014               |                      |                       |                  |                    |                 |                  |
| 4-3                                                                                                                                                                       | 0 *                  | .008               |                      |                       |                  |                    |                 |                  |
| 4-4                                                                                                                                                                       | .02*                 | .006               |                      |                       |                  |                    |                 |                  |
| 4-5                                                                                                                                                                       | .22                  | .031               |                      |                       |                  |                    |                 |                  |
| 4-6                                                                                                                                                                       | 0 *                  | .007               |                      |                       |                  |                    |                 |                  |
| 4-7                                                                                                                                                                       | .08*                 | .009               |                      |                       |                  |                    |                 |                  |
| 4-8                                                                                                                                                                       | .08*                 | .012               |                      |                       |                  |                    |                 |                  |
| 4-9 to<br>1:45 p                                                                                                                                                          | .28                  | .038               |                      |                       |                  |                    |                 |                  |
| <u>Watershed Conditions:</u><br>51% of watershed in oats, 7.3% in alfalfa, 16.5% in winter wheat, 11.7% in weeds, 7.5% sweet clover 4.5% spring wheat, and 1.5% in grass. |                      |                    |                      |                       |                  |                    |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 179.37657<br>*Estimated from record at R-1 on W-1                                                                   |                      |                    |                      |                       |                  |                    |                 |                  |

| Moscow, Idaho                                                                                                                                                             |                      |                    | Watershed W-2 (56.2) |                      |                  | Area - 177.9 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|----------------------|------------------|--------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                     |                      |                    | Rainfall             |                      |                  | Runoff             |                 |                  |
| Date                                                                                                                                                                      | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time   | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of May 4, 1940                                                                                                                                                      |                      |                    |                      |                      |                  |                    |                 |                  |
| 4-4-40                                                                                                                                                                    | 0.02*                | 0.006              | 5-4-40               | Raingage             | R-2              | 5-4-40             |                 |                  |
| 4-5                                                                                                                                                                       | .22                  | .031               | 4:09 p               | 0                    | 0                | 4:55 p             | 0               | 0                |
| 4-6                                                                                                                                                                       | 0 *                  | .007               | :19                  | .48                  | .08              | 5:10               | .0001           | 0                |
| 4-7                                                                                                                                                                       | .08*                 | .009               | :35                  | .26                  | .15              | :20                | .0002           | 0                |
| 4-8                                                                                                                                                                       | .08*                 | .012               | :50e                 | .04                  | .16              | :30                | .0004           | 0                |
| 4-9                                                                                                                                                                       | .43                  | .075               |                      |                      |                  | :35                | .0008           | 0                |
| 4-10                                                                                                                                                                      | 0 *                  | .011               |                      |                      |                  | :40                | .0013           | .0001            |
| 4-11                                                                                                                                                                      | 0 *                  | .005               |                      |                      |                  | :50                | .0018           | .0004            |
| 4-12                                                                                                                                                                      | 0 *                  | .003               |                      |                      |                  | 6:10               | .0010           | .0009            |
| 4-13                                                                                                                                                                      | 0 *                  | .002               |                      |                      |                  | :35                | .0005           | .0012            |
| 4-14,15                                                                                                                                                                   | 0 *                  | .002               |                      |                      |                  | :55                | .0002           | .0013            |
| 4-19                                                                                                                                                                      | .02*                 | 0                  |                      |                      |                  | 7:40               | .0001           | .0014            |
| 4-23                                                                                                                                                                      | .47                  | .003               |                      |                      |                  |                    |                 |                  |
| 4-24                                                                                                                                                                      | .16                  | .008               |                      |                      |                  |                    |                 |                  |
| 4-25                                                                                                                                                                      | .18                  | .004               |                      |                      |                  |                    |                 |                  |
| 4-26                                                                                                                                                                      | 0 *                  | .003               |                      |                      |                  |                    |                 |                  |
| 4-28                                                                                                                                                                      | .15*                 | .003               |                      |                      |                  |                    |                 |                  |
| 4-30                                                                                                                                                                      | .27                  | .005               |                      |                      |                  |                    |                 |                  |
| 5-1                                                                                                                                                                       | 0 *                  | .001               |                      |                      |                  |                    |                 |                  |
| 5-2                                                                                                                                                                       | .15*                 | 0                  |                      |                      |                  |                    |                 |                  |
| 5-4 to<br>4:09 p                                                                                                                                                          | .02                  | 0                  |                      |                      |                  |                    |                 |                  |
| <u>Watershed Conditions:</u><br>51% of watershed in oats, 7.3% in alfalfa, 16.5% in winter wheat, 11.7% in weeds, 7.5% sweet clover 4.5% spring wheat, and 1.5% in grass. |                      |                    |                      |                      |                  |                    |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 179.37657                                                                                                           |                      |                    |                      |                      |                  |                    |                 |                  |
| *Estimated from record at R-1 on W-1                                                                                                                                      |                      |                    |                      |                      |                  |                    |                 |                  |



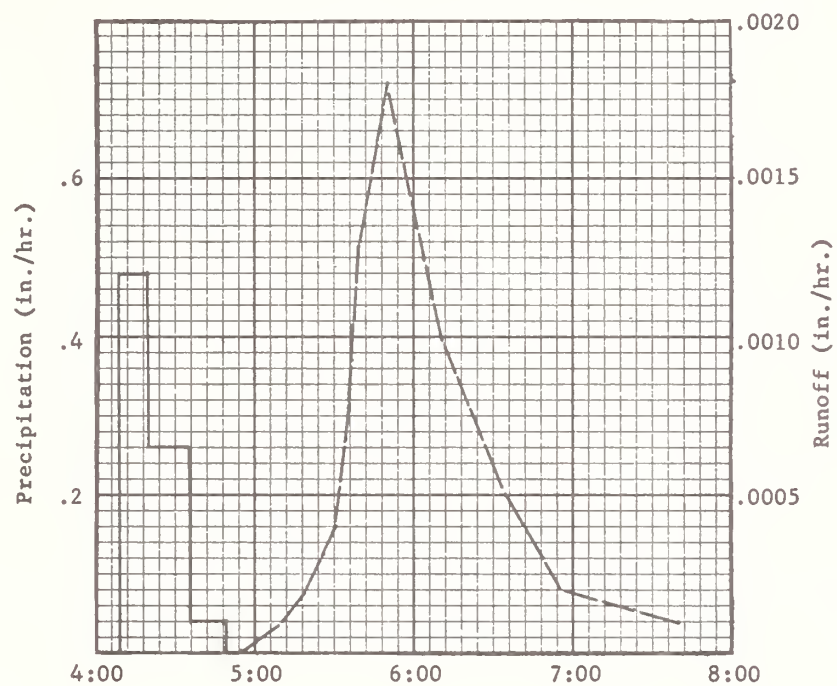


March 26, 1940 pm



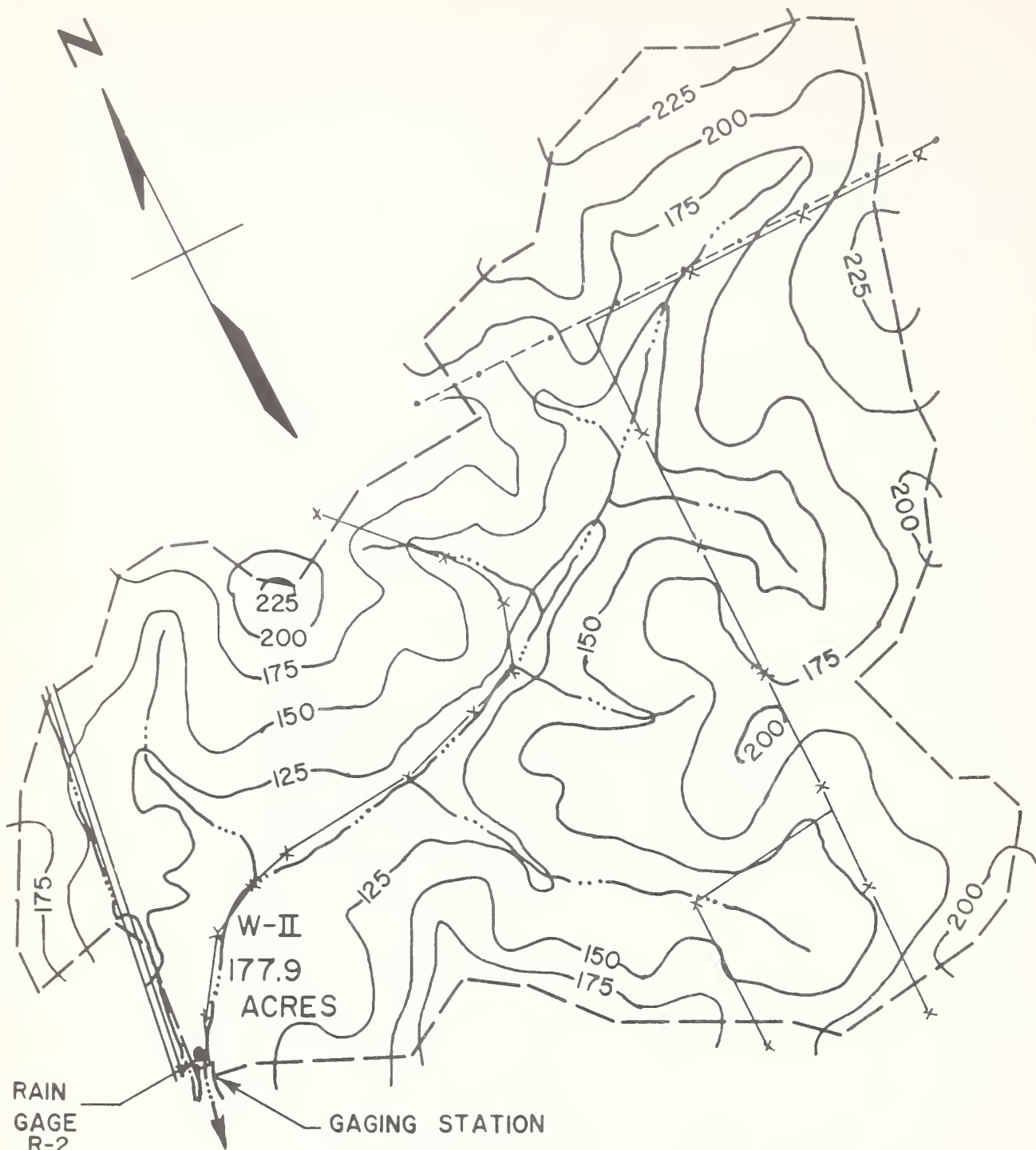
April 9, 1940 pm

MOSCOW, IDAHO WATERSHED W-2



May 4, 1940 pm

MOSCOW, IDAHO WATERSHED W-2



### LEGEND

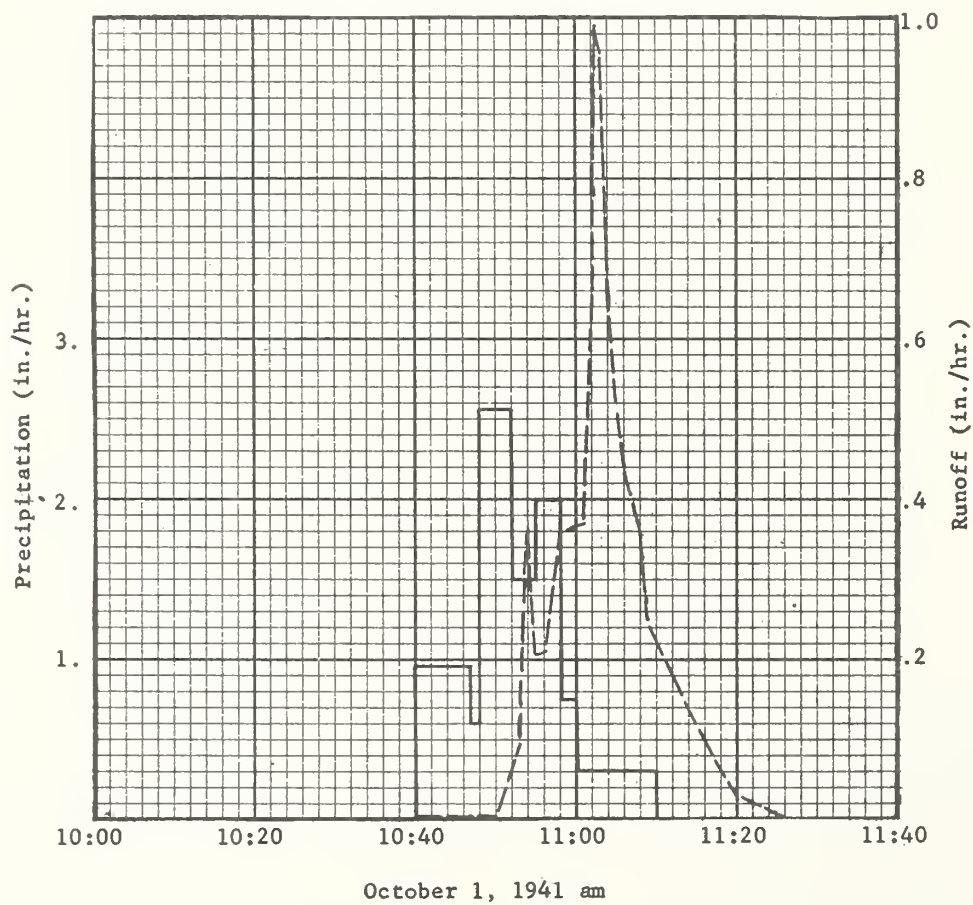
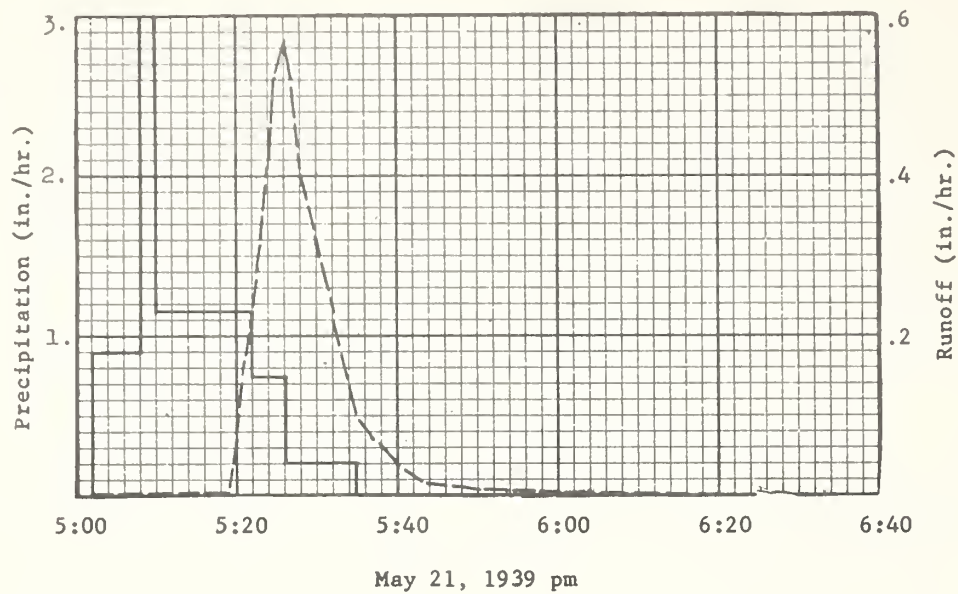
- ..... WATERWAY
- WATERSHED BOUNDARY
- 150 CONTOURS
- x FENCE
- == UNIMPROVED ROAD
- .-.-.-.- POWER LINE

150 0 600  
SCALE IN FEET

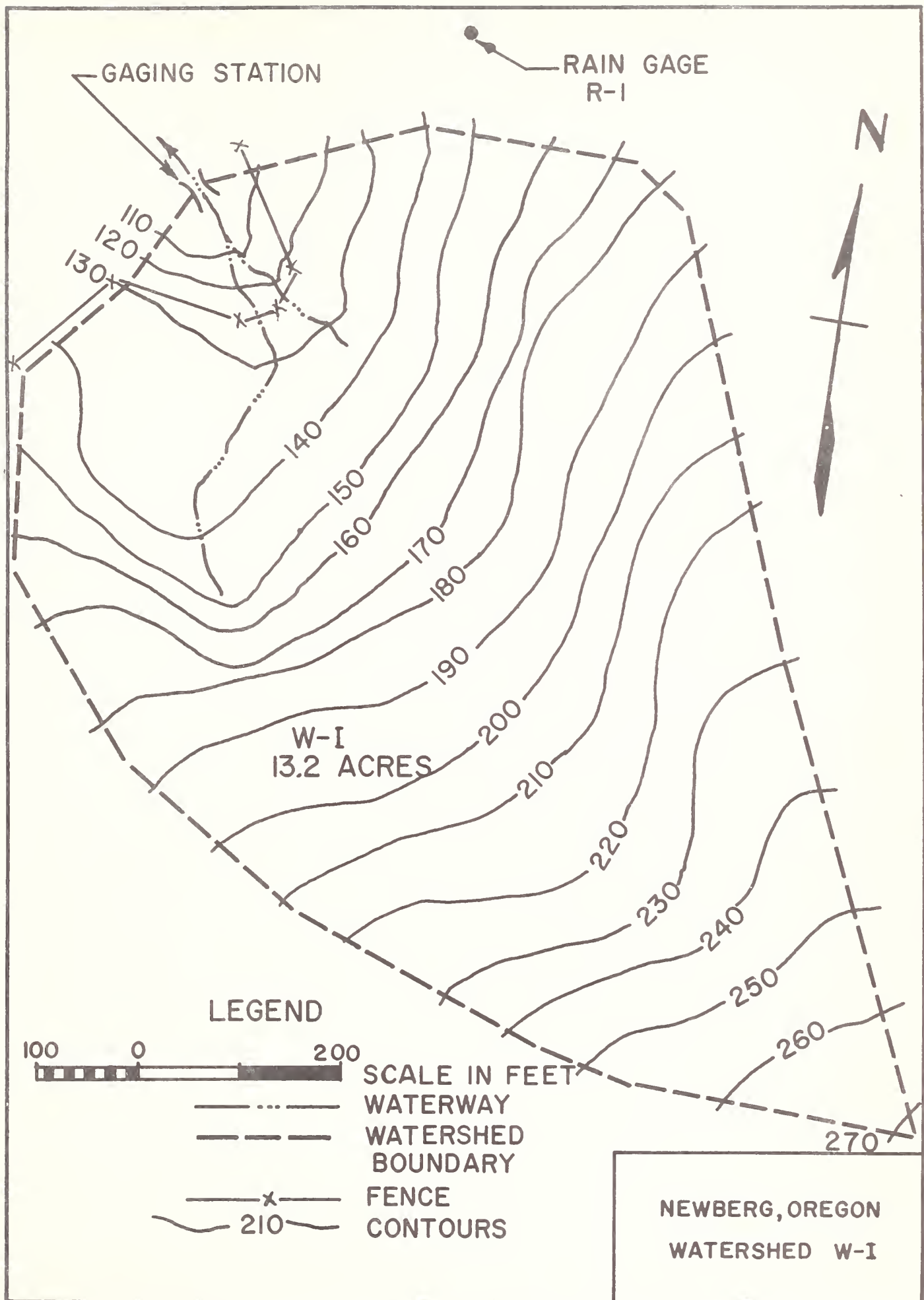
MOSCOW, IDAHO  
WATERSHED W-II

| Newberg, Oregon                                                                                                                                                                                                                                                                                                                                     |                   |                 | Watershed W-1 (57.1)     |                   |               | Area - 13.2 acres |              |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                               |                   |                 | Rainfall                 |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                                                                                                                                                                                | Rainfall (inches) | Runoff (inches) | Date and time            | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of May 21, 1939                                                                                                                                                                                                                                                                                                                               |                   |                 |                          |                   |               |                   |              |               |
| 4-21-39                                                                                                                                                                                                                                                                                                                                             | 0                 | 0.016           | 5-21-39                  | Raingage          | R-1           | 5-21-39           |              |               |
| 4-22                                                                                                                                                                                                                                                                                                                                                | 0                 | .016            | 5:02 p                   | 0                 | 0             | 5:02 p            | 0            | 0             |
| 4-23                                                                                                                                                                                                                                                                                                                                                | .03               | .016            | :08                      | .90               | .09           | :15               | .002         | 0             |
| 4-24                                                                                                                                                                                                                                                                                                                                                | .11               | .016            | :10                      | 3.00              | .19           | :19               | .004         | 0             |
| 4-25                                                                                                                                                                                                                                                                                                                                                | .10               | .016            | :22                      | 1.15              | .42           | :20               | .070         | .001          |
| 4-26, 5-17                                                                                                                                                                                                                                                                                                                                          | 0                 | .313            | :26                      | .75               | .47           | :21               | .164         | .003          |
| 5-18                                                                                                                                                                                                                                                                                                                                                | .30               | .016            | :35e                     | .20               | .50           | :22               | .232         | .006          |
| 5-19                                                                                                                                                                                                                                                                                                                                                | 0                 | .016            |                          |                   |               | :23               | .315         | .011          |
| 5-20                                                                                                                                                                                                                                                                                                                                                | 0                 | .016            |                          |                   |               | :24               | .412         | .017          |
| 5-21 to                                                                                                                                                                                                                                                                                                                                             |                   |                 |                          |                   |               | :25               | .522         | .025          |
| 5:02 p                                                                                                                                                                                                                                                                                                                                              | .23               | .002            |                          |                   |               |                   |              |               |
| <u>Watershed Conditions:</u><br>Watershed 100% walnut orchard with cover crop. 70% of watershed area was in oats 11" high, 25% in vetch 10" high, 5% in weeds 7" high. Seeded 9/15/38 with 35# vetch and 60# oats per acre. Cultivated with a spike-tooth harrow alternately in N-S direction, up and down slopes, and E-W direction across slopes. |                   |                 |                          |                   |               | :26               | .572         | .034          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :27               | .522         | .043          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :28               | .412         | .051          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :30               | .315         | .063          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :32               | .232         | .072          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :33               | .164         | .075          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :35               | .102         | .080          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :37               | .070         | .082          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :40               | .040         | .085          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :43               | .019         | .087          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :50               | .007         | .088          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | 6:00              | .003         | .089          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :20               | .002         | .090          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 | Event of October 1, 1941 |                   |               |                   |              |               |
| 9-1-41                                                                                                                                                                                                                                                                                                                                              | 1.34              | 0.069           | 10-1-41                  | Raingage          | R-1           | 10-1-41           |              |               |
| 9-2, 5                                                                                                                                                                                                                                                                                                                                              | .21               | .065            | 10:40 a                  | 0                 | 0             | 10:40 a           | 0            | 0             |
| 9-6, 9                                                                                                                                                                                                                                                                                                                                              | 0                 | .014            | :47                      | .94               | .11           | :50               | .004         | 0             |
| 9-10                                                                                                                                                                                                                                                                                                                                                | .46               | .004            | :48                      | .60               | .12           | :53               | .095         | 0             |
| 9-11                                                                                                                                                                                                                                                                                                                                                | .26               | .004            | :52                      | 2.55              | .29           | :53½              | .300         | 0             |
| 9-12                                                                                                                                                                                                                                                                                                                                                | .29               | .004            | :55                      | 1.50              | .35           | :54               | .362         | .001          |
| 9-13                                                                                                                                                                                                                                                                                                                                                | .08               | .004            | :58                      | 2.00              | .45           | :55               | .207         | .003          |
| 9-14                                                                                                                                                                                                                                                                                                                                                | 0                 | .004            | 11:00                    | .75               | .50           | :56               | .213         | .006          |
| 9-15                                                                                                                                                                                                                                                                                                                                                | 0                 | .004            | :10e                     | .30               | .55           | :58               | .360         | .014          |
| 9-16                                                                                                                                                                                                                                                                                                                                                | 0                 | .004            |                          |                   |               | 11:01             | .370         | .030          |
| 9-17                                                                                                                                                                                                                                                                                                                                                | .09               | .004            |                          |                   |               | :02               | .656         | .036          |
| 9-18                                                                                                                                                                                                                                                                                                                                                | .59               | .050            |                          |                   |               | :02½              | .991         | .041          |
| 9-19, 23                                                                                                                                                                                                                                                                                                                                            | 0                 | .173            |                          |                   |               | :03               | .958         | .047          |
| 9-24, 29                                                                                                                                                                                                                                                                                                                                            | 0                 | .022            |                          |                   |               | :04               | .688         | .060          |
| 9-30                                                                                                                                                                                                                                                                                                                                                | .05               | .004            |                          |                   |               | :05               | .521         | .072          |
| 10-1 to                                                                                                                                                                                                                                                                                                                                             |                   |                 |                          |                   |               | :06               | .441         | .081          |
| 10:40 a                                                                                                                                                                                                                                                                                                                                             | .15               | 0               |                          |                   |               | :08               | .358         | .097          |
| <u>Watershed Conditions:</u><br>Watershed 100% walnut orchard with cover crop. 20% of watershed area was in grain, 5% in vetch, and 75% in grass, weeds, and leaves. 9/8& 9/41 cover crop was planted with grain drill followed by spike-tooth harrow. 70# hairy vetch and 50# winter barley per acre were drilled in NW-SE direction.              |                   |                 |                          |                   |               | :09               | .252         | .103          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :13               | .157         | .120          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :17               | .080         | .130          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :20               | .034         | .134          |
|                                                                                                                                                                                                                                                                                                                                                     |                   |                 |                          |                   |               | :25               | .002         | .138          |
| Notes: To convert runoff in in/hr to cfs, multiply by 13.3096                                                                                                                                                                                                                                                                                       |                   |                 |                          |                   |               |                   |              |               |





NEWBERG, OREGON WATERSHED W-1



THE UNIVERSITY OF CHICAGO

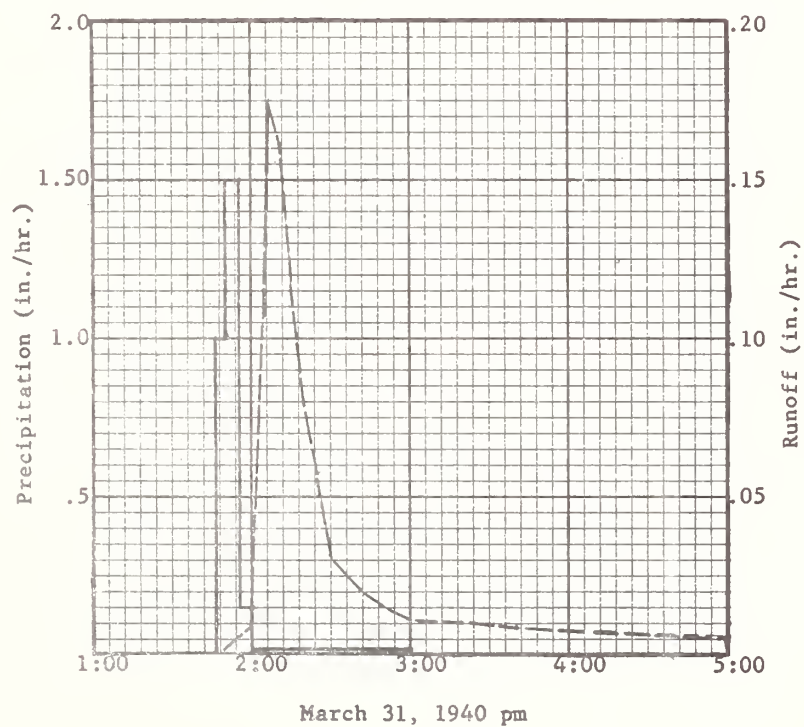
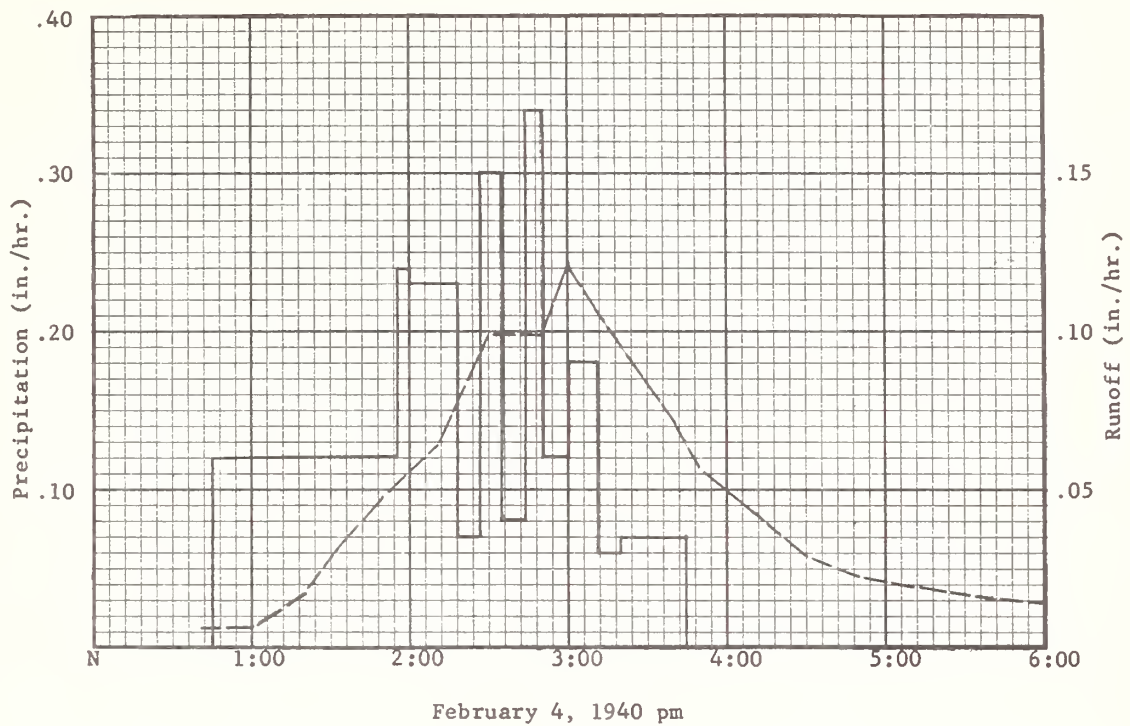


THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
1155 EAST 58TH STREET  
CHICAGO, ILLINOIS 60637  
TEL: 773-936-3700  
FAX: 773-936-3701

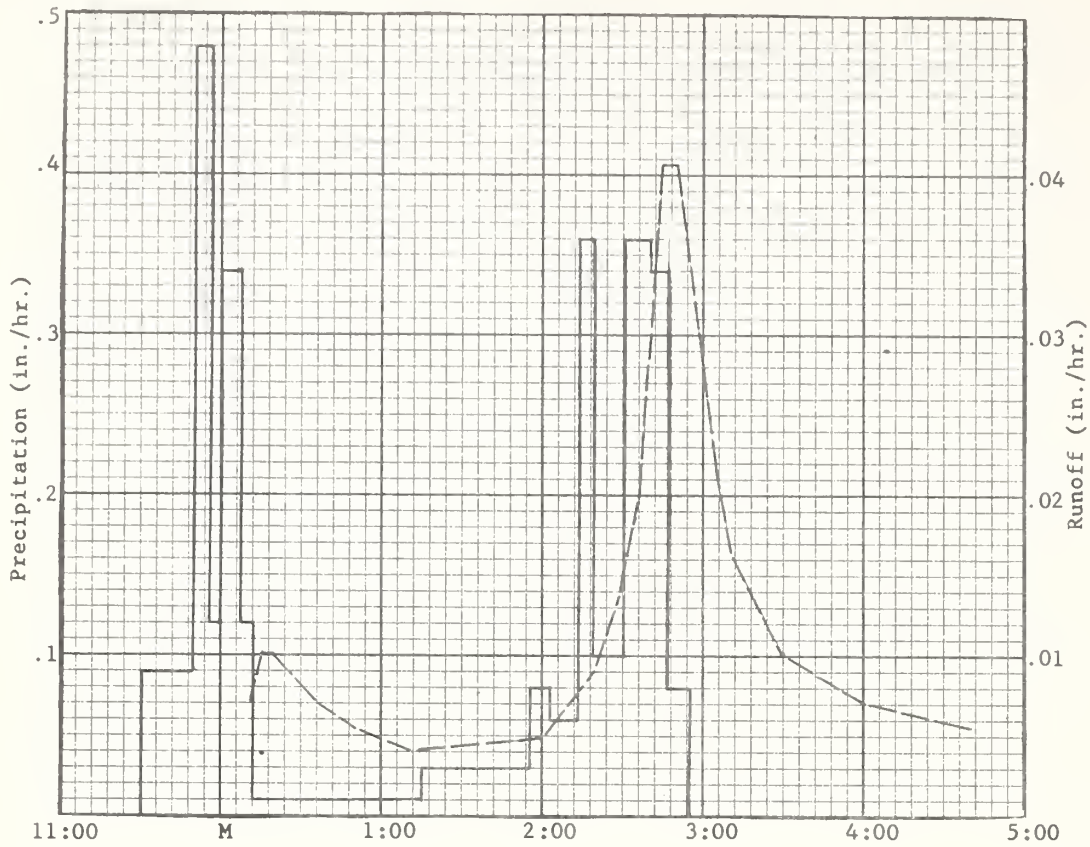
| Newberg, Oregon                                                                                                                                                                                                                                                                                |                   |                 | Watershed W-3 (57.3) |                   |               | Area - 12.8 acres |              |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                                          |                   |                 | Rainfall             |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                                                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of February 4, 1940                                                                                                                                                                                                                                                                      |                   |                 |                      |                   |               |                   |              |               |
| 1-5-40                                                                                                                                                                                                                                                                                         | 0.05              | 0.114           | 2-4-40               | Raingage          | R-3           | 2-4-40            |              |               |
| 1-6,12                                                                                                                                                                                                                                                                                         | .23               | .104            | 12:45 p              | 0                 | 0             | 12:40 p           | 0.006        | 0             |
| 1-13,19                                                                                                                                                                                                                                                                                        | .02               | .034            | 1:55                 | .12               | .14           | 1:00              | .007         | .002          |
| 1-24                                                                                                                                                                                                                                                                                           | .31               | 0               | 2:00                 | .24               | .16           | :20               | .018         | .006          |
| 1-25                                                                                                                                                                                                                                                                                           | .11               | .001            | :18                  | .23               | .23           | :30               | .029         | .010          |
| 1-26                                                                                                                                                                                                                                                                                           | 1.16              | .381            | :27                  | .07               | .24           | :50               | .049         | .023          |
| 1-27                                                                                                                                                                                                                                                                                           | .07               | .237            | :35                  | .30               | .28           | 2:10              | .064         | .042          |
| 1-28                                                                                                                                                                                                                                                                                           | 0                 | .061            | :43                  | .08               | .29           | :30               | .099         | .069          |
| 1-29                                                                                                                                                                                                                                                                                           | 0                 | .039            | :50                  | .34               | .33           | :50               | .099         | .102          |
| 1-30                                                                                                                                                                                                                                                                                           | 0                 | .015            | 3:00                 | .12               | .35           | 3:00              | .122         | .127          |
| 1-31                                                                                                                                                                                                                                                                                           | 0                 | .007            | :10                  | .18               | .38           | :10               | .109         | .140          |
| 2-1                                                                                                                                                                                                                                                                                            | 0                 | .004            | :20                  | .06               | .39           | :40               | .071         | .185          |
| 2-2                                                                                                                                                                                                                                                                                            | .02               | .006            | :45e                 | .07               | .42           | :50               | .058         | .196          |
| 2-3                                                                                                                                                                                                                                                                                            | .40               | .046            |                      |                   |               | 4:10              | .043         | .213          |
| 2-4 to N                                                                                                                                                                                                                                                                                       | .53               | .226            |                      |                   |               | :20               | .036         | .219          |
| Watershed Conditions:                                                                                                                                                                                                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| Watershed was 100% filbert and walnut orchard with cover crop. Approximately 75% of the watershed area was in barley and vetch 4" high. 20% consisted of the 15' circles under the trees and had a ground cover of leaves. 5% was bare. Seeded 9/15/39 with 40# vetch and 40# barley per acre. |                   |                 |                      |                   |               | :30               | .029         | .225          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | :50               | .023         | .233          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 5:10              | .020         | .241          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | :40               | .017         | .250          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 6:20              | .014         | .260          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 7:20              | .011         | .272          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 9:00              | .009         | .289          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 11:00             | .007         | .305          |
|                                                                                                                                                                                                                                                                                                |                   |                 |                      |                   |               | 12:00 M           | .006         | .312          |
| Event of March 31, 1940                                                                                                                                                                                                                                                                        |                   |                 |                      |                   |               |                   |              |               |
| 3-1-40                                                                                                                                                                                                                                                                                         | 0.53              | 0.350           | 3-31-40              | Raingage          | R-3           | 3-31-40           |              |               |
| 3-2                                                                                                                                                                                                                                                                                            | .07               | .128            | 1:47 p               | 0                 | 0             | 1:50 p            | 0.003        | 0             |
| 3-3                                                                                                                                                                                                                                                                                            | 0                 | .060            | :50                  | 1.00              | .05           | 2:00              | .009         | .001          |
| 3-4                                                                                                                                                                                                                                                                                            | .33               | .156            | :56                  | 1.50              | .20           | :02               | .043         | .002          |
| 3-5                                                                                                                                                                                                                                                                                            | 0                 | .056            | 2:00                 | .15               | .21           | :05               | .104         | .006          |
| 3-6                                                                                                                                                                                                                                                                                            | .05               | .049            | 3:00e                | .02               | .23           | :07               | .174         | .011          |
| 3-7                                                                                                                                                                                                                                                                                            | .35               | .169            |                      |                   |               | :10               | .162         | .019          |
| 3-8,12                                                                                                                                                                                                                                                                                         | .05               | .121            |                      |                   |               | :15               | .118         | .030          |
| 3-13                                                                                                                                                                                                                                                                                           | 0                 | .007            |                      |                   |               | :20               | .079         | .038          |
| 3-14                                                                                                                                                                                                                                                                                           | 0                 | .007            |                      |                   |               | :25               | .058         | .044          |
| 3-15                                                                                                                                                                                                                                                                                           | .18               | .025            |                      |                   |               | :30               | .038         | .048          |
| 3-16                                                                                                                                                                                                                                                                                           | 0                 | .006            |                      |                   |               | :40               | .022         | .053          |
| 3-17                                                                                                                                                                                                                                                                                           | 0                 | .004            |                      |                   |               | :50               | .015         | .056          |
| 3-18                                                                                                                                                                                                                                                                                           | 0                 | .003            |                      |                   |               | 3:00              | .012         | .058          |
| 3-23                                                                                                                                                                                                                                                                                           | .10               | 0               |                      |                   |               | :20               | .011         | .062          |
| 3-25                                                                                                                                                                                                                                                                                           | .40               | .015            |                      |                   |               | :40               | .009         | .066          |
| 3-26                                                                                                                                                                                                                                                                                           | 1.23              | .516            |                      |                   |               | 5:00              | .006         | .076          |
| 3-27                                                                                                                                                                                                                                                                                           | .55               | .497            |                      |                   |               |                   |              |               |
| 3-28                                                                                                                                                                                                                                                                                           | .18               | .158            |                      |                   |               |                   |              |               |
| 3-29                                                                                                                                                                                                                                                                                           | .59               | .445            |                      |                   |               |                   |              |               |
| 3-30                                                                                                                                                                                                                                                                                           | 0                 | .100            |                      |                   |               |                   |              |               |
| 3-31 to                                                                                                                                                                                                                                                                                        |                   |                 |                      |                   |               |                   |              |               |
| 1:50 p                                                                                                                                                                                                                                                                                         | 0                 | .037            |                      |                   |               |                   |              |               |
| Watershed Conditions:                                                                                                                                                                                                                                                                          |                   |                 |                      |                   |               |                   |              |               |
| Watershed was 100% filbert and walnut orchard with cover crop. 80% of watershed area was in barley and vetch about 9" high. Seeded 9/15/39 with 40# vetch and 40# barley per acre.                                                                                                             |                   |                 |                      |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 12.9062.                                                                                                                                                                                                                                 |                   |                 |                      |                   |               |                   |              |               |



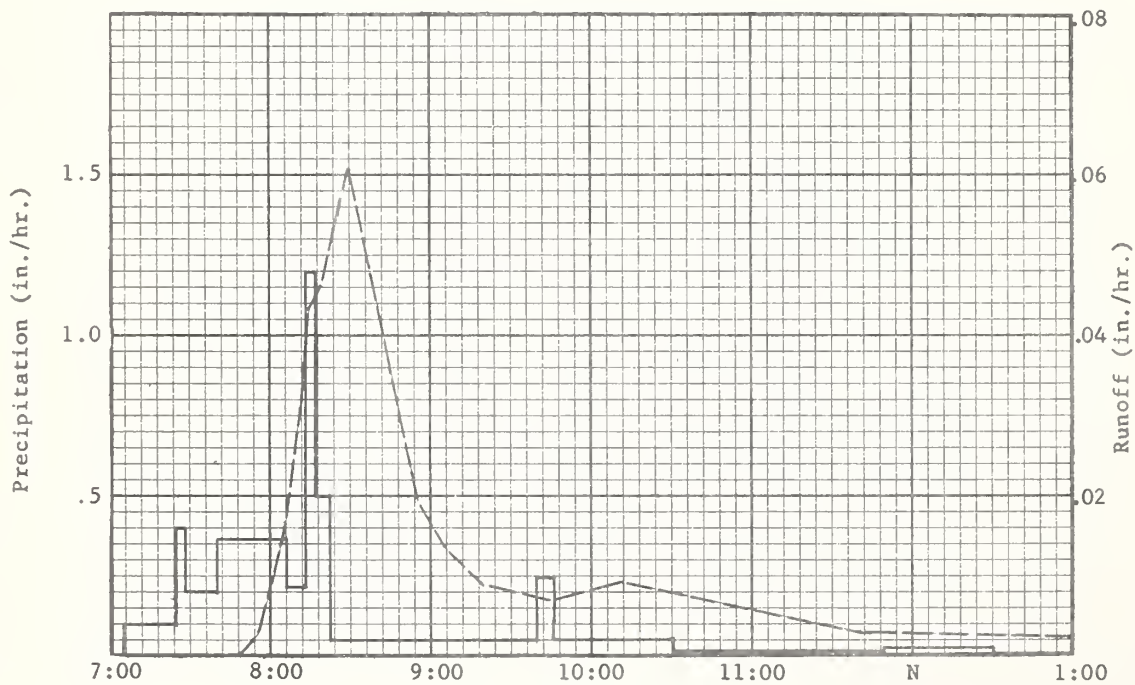
| Newberg, Oregon                                                                                                                                                                                                                                                                                                                       |                      |                    | Watershed W-3 (57.3) |                       |                  | Area - 12.8 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------|-----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                                                                                                 |                      |                    | Rainfall             |                       |                  | Runoff            |                 |                  |
| Date                                                                                                                                                                                                                                                                                                                                  | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time     | Intensity,<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of December 4 & 5, 1940                                                                                                                                                                                                                                                                                                         |                      |                    |                      |                       |                  |                   |                 |                  |
| 11-6-40                                                                                                                                                                                                                                                                                                                               | 0.47                 | 0.002              | 12-4-40              | Raingage              | R-3              | 12-5-40           |                 |                  |
| 11-7                                                                                                                                                                                                                                                                                                                                  | .70                  | .039               | 11:30 p              | 0                     | 0                | 12:10 a           | 0.007           | 0                |
| 11-8                                                                                                                                                                                                                                                                                                                                  | .35                  | .054               | :50                  | .09                   | .03              | :15               | .010            | .001             |
| 11-9,12                                                                                                                                                                                                                                                                                                                               | .15                  | .013               | :55                  | .48                   | .07              | :20               | .010            | .002             |
| 11-17                                                                                                                                                                                                                                                                                                                                 | .29                  | 0                  | 12:00 M              | .12                   | .08              | :35               | .007            | .004             |
| 11-18                                                                                                                                                                                                                                                                                                                                 | .02                  | 0                  | :07 a                | .34                   | .12              | :50               | .006            | .005             |
| 11-20                                                                                                                                                                                                                                                                                                                                 | .36                  | .003               | :12                  | .12                   | .13              | 1:10              | .004            | .007             |
| 11-21                                                                                                                                                                                                                                                                                                                                 | 0                    | .001               | 1:15                 | .01                   | .14              | 2:00              | .005            | .011             |
| 11-23                                                                                                                                                                                                                                                                                                                                 | .25                  | .001               | :55                  | .03                   | .16              | :20               | .009            | .013             |
| 11-24                                                                                                                                                                                                                                                                                                                                 | .63                  | .079               | 2:03                 | .08                   | .17              | :28               | .014            | .014             |
| 11-25                                                                                                                                                                                                                                                                                                                                 | .02                  | .026               | :13                  | .06                   | .18              | :36               | .020            | .017             |
| 11-26                                                                                                                                                                                                                                                                                                                                 | 0                    | .009               | :18                  | .36                   | .21              | :45               | .041            | .021             |
| 11-27                                                                                                                                                                                                                                                                                                                                 | .42                  | .076               | :30                  | .10                   | .23              | :50               | .041            | .025             |
| 11-28                                                                                                                                                                                                                                                                                                                                 | .80                  | .237               | :40                  | .36                   | .29              | 3:05              | .022            | .032             |
| 11-29                                                                                                                                                                                                                                                                                                                                 | 0                    | .118               | :47                  | .34                   | .33              | :10               | .017            | .034             |
| 11-30                                                                                                                                                                                                                                                                                                                                 | 0                    | .060               | :55e                 | .08                   | .34              | :20               | .014            | .036             |
| 12-1                                                                                                                                                                                                                                                                                                                                  | .05                  | .055               |                      |                       |                  | :30               | .011            | .039             |
| 12-2                                                                                                                                                                                                                                                                                                                                  | 0                    | .034               |                      |                       |                  | :40               | .009            | .040             |
| 12-3                                                                                                                                                                                                                                                                                                                                  | .20                  | .062               |                      |                       |                  | 4:00              | .007            | .043             |
| 12-4                                                                                                                                                                                                                                                                                                                                  | .08                  | .034               |                      |                       |                  | :40               | .006            | .047             |
| Watershed Conditions:                                                                                                                                                                                                                                                                                                                 |                      |                    |                      |                       |                  | 6:00              | .004            | .054             |
| Watershed 100% filbert and walnut orchard. 90% of watershed area was in vetch 5" high; 10% in weeds, leaves, and grass 2" high. Cover crop of straight vetch was drilled in at 60# per acre on 8/27/40. On south side of waterway cover crop was seeded up and down slopes leaving a strip 4'-6' wide under trees with no cover crop. |                      |                    |                      |                       |                  |                   |                 |                  |
| Event of November 14, 1941                                                                                                                                                                                                                                                                                                            |                      |                    |                      |                       |                  |                   |                 |                  |
| 10-17-41                                                                                                                                                                                                                                                                                                                              | 0.02                 | 0                  | 11-14-41             | Raingage              | R-3              | 11-14-41          |                 |                  |
| 10-18                                                                                                                                                                                                                                                                                                                                 | .31                  | 0                  | 7:05 a               | 0                     | 0                | 7:55 a            | 0.003           | 0                |
| 10-26                                                                                                                                                                                                                                                                                                                                 | .12                  | 0                  | :25                  | .09                   | .03              | 8:00              | .008            | .001             |
| 10-27                                                                                                                                                                                                                                                                                                                                 | .87                  | 0                  | :28                  | .40                   | .05              | :05               | .017            | .002             |
| 10-31                                                                                                                                                                                                                                                                                                                                 | .10                  | 0                  | :40                  | .20                   | .09              | :10               | .031            | .004             |
| 11-3                                                                                                                                                                                                                                                                                                                                  | .59                  | 0                  | 8:06                 | .37                   | .25              | :15               | .043            | .007             |
| 11-4                                                                                                                                                                                                                                                                                                                                  | .17                  | 0                  | :14                  | .22                   | .28              | :20               | .046            | .010             |
| 11-10                                                                                                                                                                                                                                                                                                                                 | .02                  | 0                  | :16                  | 1.20                  | .32              | :30               | .061            | .019             |
| 11-11                                                                                                                                                                                                                                                                                                                                 | .25                  | 0                  | :22                  | .50                   | .37              | :45               | .036            | .031             |
| 11-12                                                                                                                                                                                                                                                                                                                                 | .05                  | 0                  | 9:40                 | .05                   | .44              | :55               | .020            | .036             |
| 11-13                                                                                                                                                                                                                                                                                                                                 | 1.42                 | .048               | :45                  | .24                   | .46              | 9:05              | .014            | .039             |
| 11-14 to                                                                                                                                                                                                                                                                                                                              |                      |                    | 10:30                | .05                   | .50              | :20               | .009            | .042             |
| 7:05 a                                                                                                                                                                                                                                                                                                                                | .20                  | .009               | 11:50                | .02                   | .53              | :45               | .007            | .045             |
| Watershed Conditions:                                                                                                                                                                                                                                                                                                                 |                      |                    | 12:30 p              | .03                   | .55              | 10:10             | .009            | .048             |
| Watershed 100% filbert and walnut orchard with cover crop. 5% of area in vetch 3" high, 10% in grain 5" high, and 85% in grass, weeds, and leaves 2" high. Cover afforded by vetch and grain scant, heavy uniform growth of weeds, leaves and grass extends over watershed.                                                           |                      |                    | 2:10e                | .02                   | .58              | 11:40             | .003            | .057             |
|                                                                                                                                                                                                                                                                                                                                       |                      |                    |                      |                       |                  | 2:30 p            | .002            | .064             |
|                                                                                                                                                                                                                                                                                                                                       |                      |                    |                      |                       |                  | 3:40              | .001            | .066             |
| Notes: To convert runoff in in/hr to cfs, multiply by 12.9062                                                                                                                                                                                                                                                                         |                      |                    |                      |                       |                  |                   |                 |                  |



NEWBERG, OREGON WATERSHED W-3

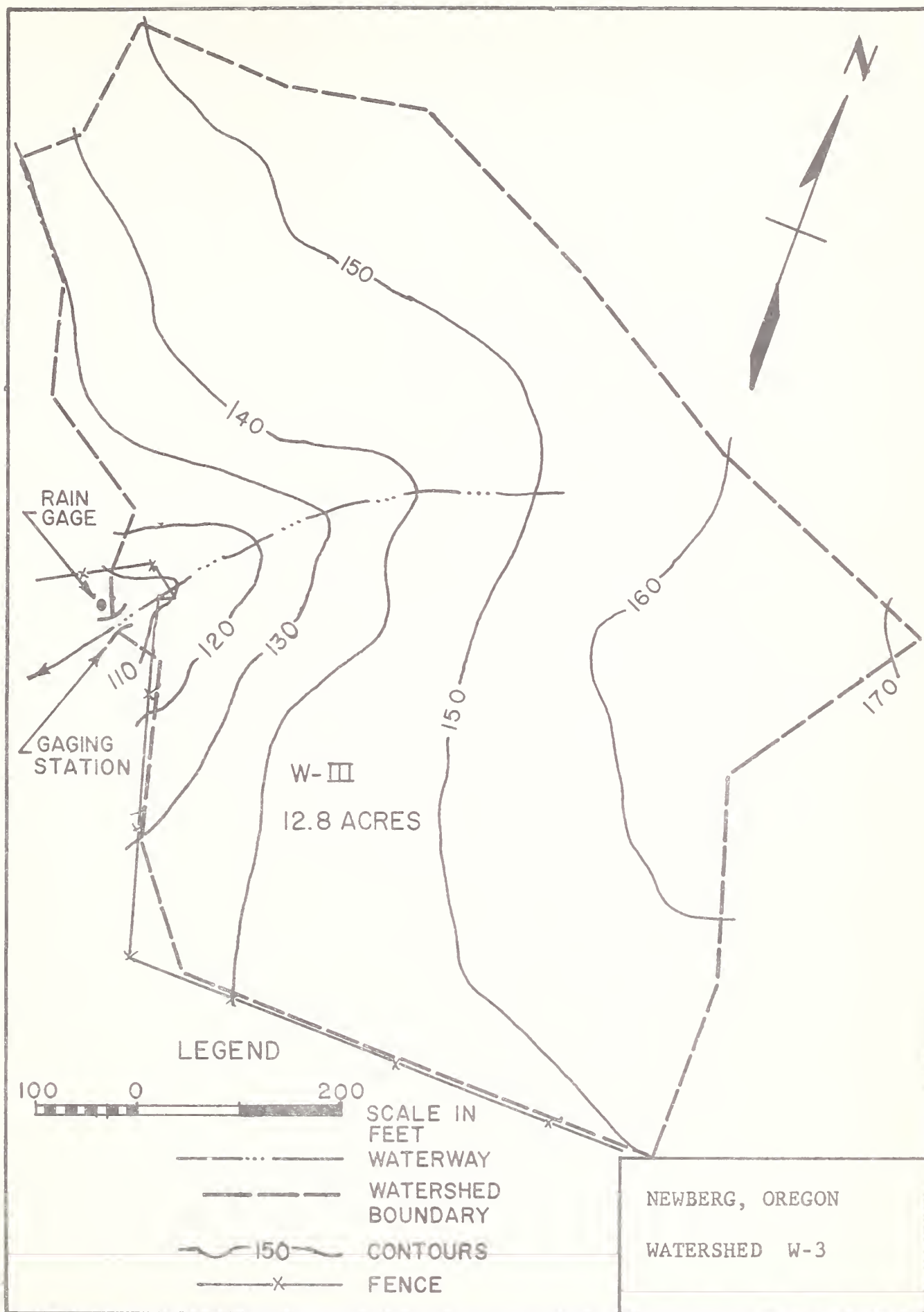


December 4 & 5, 1940



November 14, 1941 am

NEWBERG, OREGON WATERSHED W-3

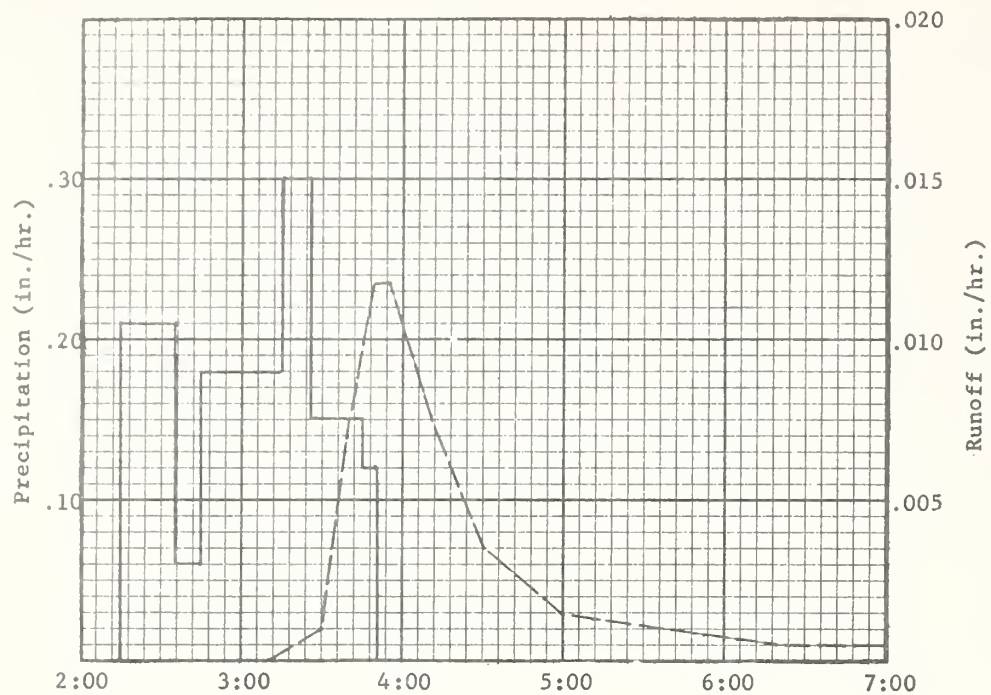


Sheet 5 of 5

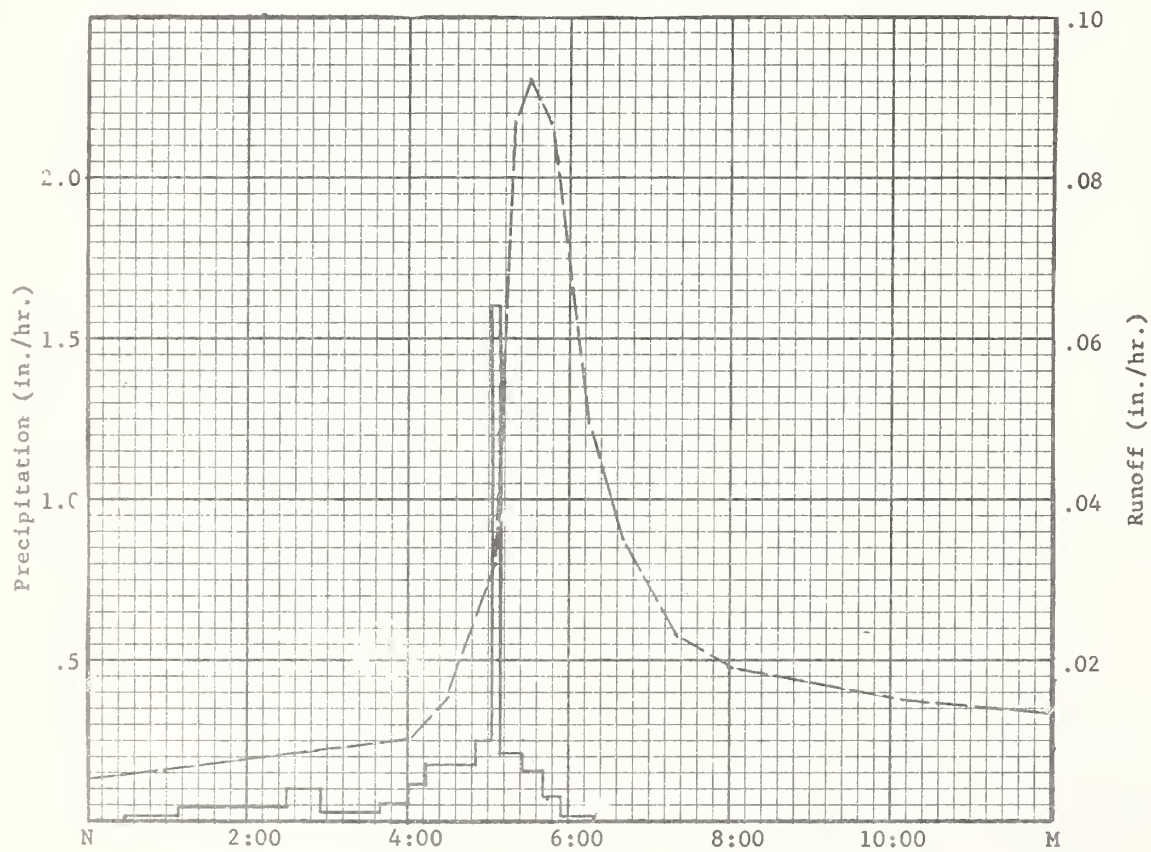




| Newberg, Oregon                                                                                                                                                                                   |                   |                 | Watershed W-4 (57.4) |                   |               | Area - 6.20 acres |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                             |                   |                 | Rainfall             |                   |               | Runoff            |              |               |
| Date                                                                                                                                                                                              | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| <b>Event of January 26, 1940</b>                                                                                                                                                                  |                   |                 |                      |                   |               |                   |              |               |
| 12-27-39                                                                                                                                                                                          | 0.37*             | 0               | 1-26-40              | Raingage          | R-4           | 1-26-40           |              |               |
| 12-28                                                                                                                                                                                             | .50*              | 0               | 2:15 a               | 0                 | 0             | 2:30 a            | 0            | 0             |
| 12-29                                                                                                                                                                                             | 1.26              | .059            | :35                  | .21               | .07           | 3:10              | 0            | 0             |
| 12-30                                                                                                                                                                                             | .21               | .017            | :45                  | .06               | .08           | :30               | .001         | 0             |
| 12-31                                                                                                                                                                                             | .69               | .196            | 3:15                 | .18               | .17           | :40               | .008         | .001          |
| 1-1-40                                                                                                                                                                                            | .25*              | .111            | :25                  | .30               | .22           | :50               | .012         | .003          |
| 1-2                                                                                                                                                                                               | .25*              | .060            | :45                  | .15               | .27           | :55               | .012         | .004          |
| 1-3                                                                                                                                                                                               | .61               | .112            | :50e                 | .12               | .28           | 4:10              | .008         | .006          |
| 1-4                                                                                                                                                                                               | .40               | .270            |                      |                   |               | :30               | .004         | .008          |
| 1-5                                                                                                                                                                                               | .05               | .110            |                      |                   |               | 5:00              | .001         | .009          |
| 1-6,12                                                                                                                                                                                            | .23*              | .059            |                      |                   |               | 6:20              | .001         | .010          |
| 1-13,19                                                                                                                                                                                           | .02*              | 0               |                      |                   |               | 7:00              | .001         | .011          |
| 1-24                                                                                                                                                                                              | .27               | 0               |                      |                   |               |                   |              |               |
| 1-25                                                                                                                                                                                              | .16               | 0               |                      |                   |               |                   |              |               |
| 1-26 to 2:30 a                                                                                                                                                                                    | .02               | 0               |                      |                   |               |                   |              |               |
| <b>Watershed Conditions:</b><br>Watershed is 100% prune orchard with no cover crop seeded. 80% of area is in grass 1-2" high and 20% in weeds 1-4" high.                                          |                   |                 |                      |                   |               |                   |              |               |
| <b>Event of December 22, 1941</b>                                                                                                                                                                 |                   |                 |                      |                   |               |                   |              |               |
| 11-28-41                                                                                                                                                                                          | 0.65              | 0               | 12-22-41             | Raingage          | R-4           | 12-22-41          |              |               |
| 11-29                                                                                                                                                                                             | .10               | 0               | 12:30 p              | 0                 | 0             | 12:00 N           | 0.005        | 0             |
| 11-30                                                                                                                                                                                             | .05               | 0               | 1:10                 | .03               | .02           | 4:00 p            | .010         | .03           |
| 12-1                                                                                                                                                                                              | .55               | 0               | 2:30                 | .04               | .07           | :30               | .015         | .04           |
| 12-2                                                                                                                                                                                              | 1.53              | .550            | :55                  | .10               | .11           | 5:05              | .032         | .05           |
| 12-3                                                                                                                                                                                              | .63               | .365            | 3:40                 | .03               | .13           | :10               | .049         | .05           |
| 12-4                                                                                                                                                                                              | .07               | .157            | 4:00                 | .06               | .15           | :20               | .087         | .07           |
| 12-5                                                                                                                                                                                              | .16               | .037            | :15                  | .12               | .18           | :30               | .092         | .08           |
| 12-6                                                                                                                                                                                              | .02               | .028            | :50                  | .17               | .28           | :45               | .087         | .10           |
| 12-7                                                                                                                                                                                              | 0                 | .008            | 5:02                 | .25               | .33           | 6:15              | .049         | .14           |
| 12-8                                                                                                                                                                                              | .02               | 0               | :05                  | 1.60              | .41           | :40               | .035         | .15           |
| 12-9                                                                                                                                                                                              | .05               | 0               | :25                  | .21               | .48           | 7:20              | .024         | .17           |
| 12-13                                                                                                                                                                                             | .37               | .004            | :40                  | .16               | .52           | 8:00              | .019         | .19           |
| 12-14                                                                                                                                                                                             | .32               | .030            | :55                  | .08               | .54           | 10:00             | .015         | .22           |
| 12-15                                                                                                                                                                                             | 1.55              | .697            | 6:20e                | .02               | .55           | 12:00 M           | .013         | .25           |
| 12-16                                                                                                                                                                                             | .46               | .537            |                      |                   |               |                   |              |               |
| 12-17                                                                                                                                                                                             | .86               | .592            |                      |                   |               |                   |              |               |
| 12-18                                                                                                                                                                                             | 1.39              | 1.205           |                      |                   |               |                   |              |               |
| 12-19                                                                                                                                                                                             | 1.35              | 1.279           |                      |                   |               |                   |              |               |
| 12-20                                                                                                                                                                                             | .07               | .373            |                      |                   |               |                   |              |               |
| 12-21                                                                                                                                                                                             | .31               | .180            |                      |                   |               |                   |              |               |
| 12-22 to 12:30 p                                                                                                                                                                                  | 0                 | .069            |                      |                   |               |                   |              |               |
| <b>Watershed Conditions:</b><br>Watershed is 100% prune orchard with cover crop. All cover is volunteer. 95% of the watershed area was in grass, weeds, and leaves, 1% in vetch, and 4% in grain. |                   |                 |                      |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 6.2515<br>*Estimated from record at R-3 on W-3                                                                                              |                   |                 |                      |                   |               |                   |              |               |

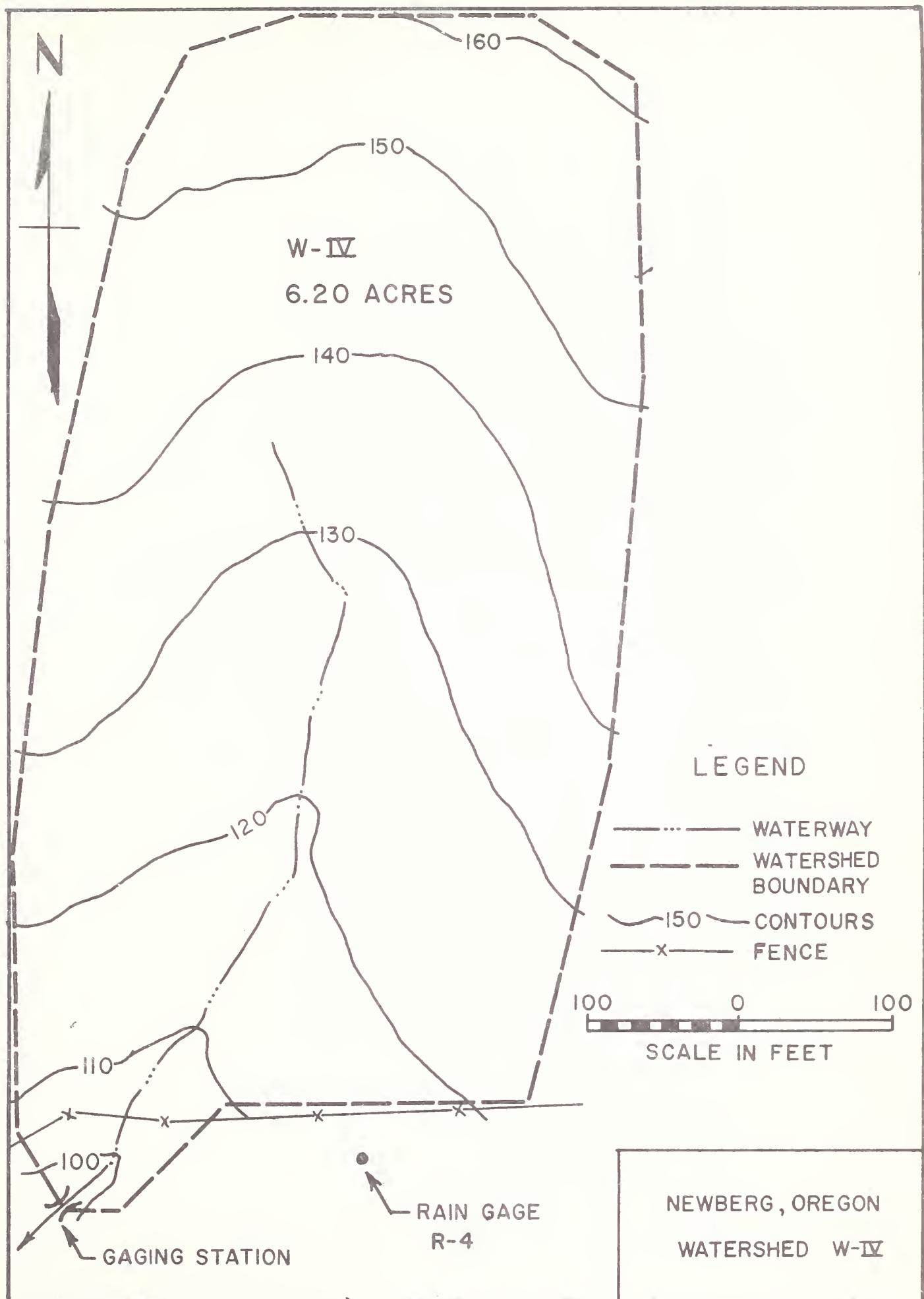


January 26, 1940 am



December 22, 1941 pm

NEWBERG, OREGON WATERSHED W-4

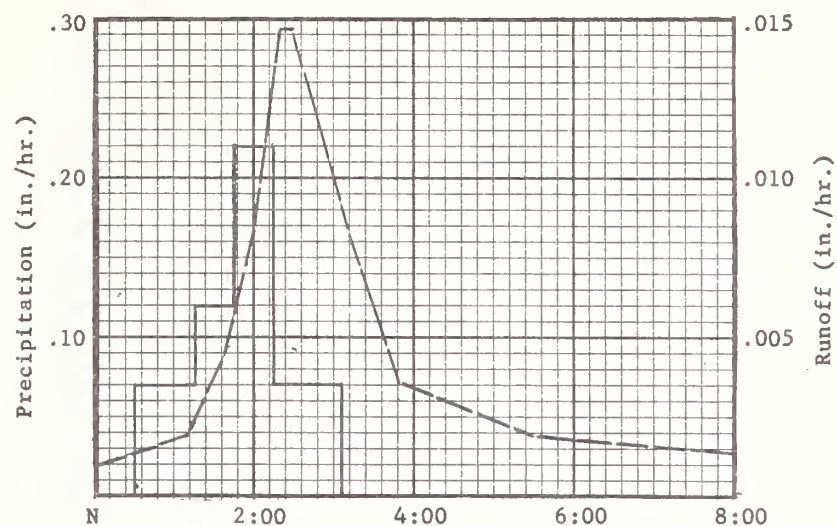




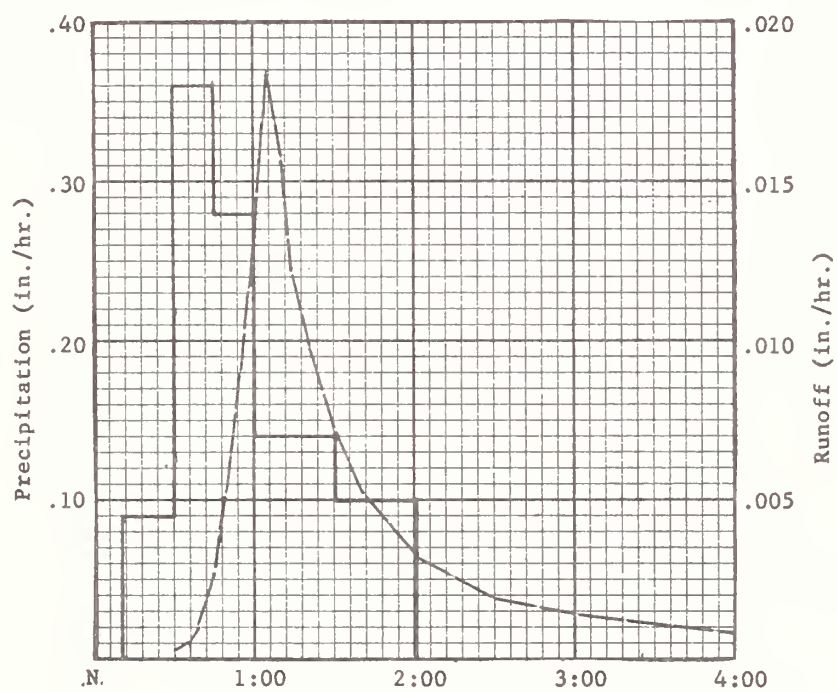


| Pullman, Washington                                            |                   |                 | Watershed G.S. 2 (60.1) |                   |               | Area - 68.2 acres |              |               |
|----------------------------------------------------------------|-------------------|-----------------|-------------------------|-------------------|---------------|-------------------|--------------|---------------|
| Antecedent conditions                                          |                   |                 | Rainfall                |                   |               | Runoff            |              |               |
| Date                                                           | Rainfall (inches) | Runoff (inches) | Date and time           | Intensity (in/hr) | Acc. (inches) | Date and time     | Rate (in/hr) | Acc. (inches) |
| Event of January 25, 1941                                      |                   |                 |                         |                   |               |                   |              |               |
| 12-26-40                                                       | 0.32              | 0.016           | 1-25-41                 | Raingage          | F-3           | 1-25-41           |              |               |
| 12-27                                                          | .23               | .025            | 12:30 p                 | 0                 | 0             | 12:00 N           | 0.001        | 0             |
| 12-28,29                                                       | 0                 | .005            | 1:15                    | .07               | .05           | 1:10 p            | .002         | .002          |
| 12-30                                                          | .11               | .001            | :45                     | .12               | .11           | :40               | .005         | .003          |
| 12-31                                                          | 0                 | .001            | 2:15                    | .22               | .22           | 2:00              | .008         | .005          |
| 1-4                                                            | .10               | 0               | 3:05e                   | .07               | .28           | :20               | .015         | .009          |
| 1-5                                                            | .38               | 0               |                         |                   |               | :30               | .015         | .012          |
| 1-6                                                            | .23               | 0               |                         |                   |               | 3:10              | .008         | .016          |
| 1-13                                                           | .01               | .001            |                         |                   |               | :50               | .004         | .020          |
| 1-14                                                           | 0                 | .006            |                         |                   |               | 5:30              | .002         | .033          |
| 1-15                                                           | .16               | .003            |                         |                   |               | 9:00              | .001         | .039          |
| 1-16                                                           | 0                 | .002            |                         |                   |               | 12:00 M           | .001         | .042          |
| 1-17                                                           | .47               | .019            |                         |                   |               |                   |              |               |
| 1-18                                                           | .38               | .085            |                         |                   |               |                   |              |               |
| 1-19                                                           | .02               | .045            |                         |                   |               |                   |              |               |
| 1-20,23                                                        | 0                 | .056            |                         |                   |               |                   |              |               |
| 1-24                                                           | .23               | .026            |                         |                   |               |                   |              |               |
| 1-25 to 12:30 p                                                | .03               | .005            |                         |                   |               |                   |              |               |
| Watershed Conditions:                                          |                   |                 |                         |                   |               |                   |              |               |
| Watershed area in mixed cover.                                 |                   |                 |                         |                   |               |                   |              |               |
| Fall plowed wet. No snow cover and no frost on ground.         |                   |                 |                         |                   |               |                   |              |               |
| Event of March 3, 1941                                         |                   |                 |                         |                   |               |                   |              |               |
| 2-1-41                                                         | 0.12              | 0.015           | 3-3-41                  | Raingage          | F-3           | 3-3-41            |              |               |
| 2-2,6                                                          | 0                 | .033            | 12:10 p                 | 0                 | 0             | 12:30 p           | 0            | 0             |
| 2-7                                                            | .14               | .013            | :30                     | .09               | .03           | :35               | .001         | 0             |
| 2-8                                                            | 0                 | .007            | :45                     | .36               | .12           | :40               | .001         | 0             |
| 2-9                                                            | .14               | .014            | 1:00                    | .28               | .19           | :45               | .003         | 0             |
| 2-10                                                           | .17               | .025            | :30                     | .14               | .26           | :50               | .005         | .001          |
| 2-11                                                           | .10               | .021            | 2:00e                   | .10               | .31           | :55               | .009         | .001          |
| 2-12                                                           | .01               | .009            |                         |                   |               | 1:00              | .013         | .002          |
| 2-13,22                                                        | 0                 | .068            |                         |                   |               | :05               | .019         | .003          |
| 2-23                                                           | .06               | .009            |                         |                   |               | :10               | .016         | .005          |
| 2-24                                                           | .29               | .015            |                         |                   |               | :15               | .012         | .006          |
| 2-25                                                           | 0                 | .017            |                         |                   |               | :20               | .010         | .007          |
| 2-26                                                           | 0                 | .008            |                         |                   |               | :30               | .007         | .008          |
| 2-27                                                           | .03               | .006            |                         |                   |               | :40               | .005         | .009          |
| 2-28                                                           | .17               | .020            |                         |                   |               | 2:00              | .003         | .011          |
| 3-1                                                            | .16               | .023            |                         |                   |               | :30               | .002         | .014          |
| 3-2                                                            | .02               | .013            |                         |                   |               | 3:00              | .002         | .014          |
| 3-3 to 12:10 p                                                 | 0                 | .005            |                         |                   |               | 4:00              | .001         | .014          |
|                                                                |                   |                 |                         |                   |               | 5:00              | .001         | .015          |
| Watershed Conditions:                                          |                   |                 |                         |                   |               |                   |              |               |
| Watershed area in mixed cover.                                 |                   |                 |                         |                   |               |                   |              |               |
| Most of watershed fall plowed.                                 |                   |                 |                         |                   |               |                   |              |               |
| No frost on ground.                                            |                   |                 |                         |                   |               |                   |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 68.76606 |                   |                 |                         |                   |               |                   |              |               |

| Pullman, Washington                                                                                                               |                      |                    | Watershed G.S. 2 (60.1) |                      |                  | Area - 68.2 acres |                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|-------------------------|----------------------|------------------|-------------------|-----------------|------------------|
| Antecedent conditions                                                                                                             |                      |                    | Rainfall                |                      |                  | Runoff            |                 |                  |
| Date                                                                                                                              | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time        | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time  | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of April 20, 1943                                                                                                           |                      |                    |                         |                      |                  |                   |                 |                  |
| 3-21,25-43                                                                                                                        | 0                    | 0.086              | 4-20-43                 | Raingage             | F-3              | 4-20-43           |                 |                  |
| 3-26                                                                                                                              | .41                  | .058               | 5:45 p                  | 0                    | 0                | 12:00 N           | 0.001           | 0                |
| 3-27                                                                                                                              | 0                    | .031               | 6:00                    | .04                  | .01              | 3:00 p            | .002            | 0                |
| 3-28                                                                                                                              | 0                    | .025               | 8:20                    | .06                  | .15              | 6:30              | .003            | .001             |
| 3-29                                                                                                                              | .22                  | .051               | :30                     | .24                  | .19              | 7:30              | .007            | .002             |
| 3-30                                                                                                                              | .18                  | .034               | 9:00e                   | .12                  | .25              | 8:00              | .013            | .002             |
| 3-31                                                                                                                              | .95                  | .196               |                         |                      |                  | :20               | .019            | .003             |
| 4-1                                                                                                                               | .13                  | .068               |                         |                      |                  | :40               | .034            | .004             |
| 4-2                                                                                                                               | 0                    | .046               |                         |                      |                  | 9:00              | .053            | .005             |
| 4-3                                                                                                                               | .02                  | .041               |                         |                      |                  | :20               | .034            | .007             |
| 4-4,6                                                                                                                             | 0                    | .106               |                         |                      |                  | :40               | .022            | .007             |
| 4-7,8                                                                                                                             | .03                  | .062               |                         |                      |                  | 10:00             | .013            | .008             |
| 4-9,11                                                                                                                            | .03                  | .080               |                         |                      |                  | 11:00             | .007            | .009             |
| 4-12                                                                                                                              | 0                    | .023               |                         |                      |                  | 12:00 M           | .005            | .010             |
| 4-13                                                                                                                              | 0                    | .019               |                         |                      |                  |                   |                 |                  |
| 4-14                                                                                                                              | 0                    | .016               |                         |                      |                  |                   |                 |                  |
| 4-15                                                                                                                              | 0                    | .013               |                         |                      |                  |                   |                 |                  |
| 4-16                                                                                                                              | 0                    | .009               |                         |                      |                  |                   |                 |                  |
| 4-17                                                                                                                              | 0                    | .007               |                         |                      |                  |                   |                 |                  |
| 4-18                                                                                                                              | 0                    | .004               |                         |                      |                  |                   |                 |                  |
| 4-19                                                                                                                              | 0                    | .001               |                         |                      |                  |                   |                 |                  |
| 4-20 to<br>12:00 N                                                                                                                | .04                  | .001               |                         |                      |                  |                   |                 |                  |
| <u>Watershed Conditions:</u><br>Watershed area prepared for sweet<br>clover. April 15-17 fields har-<br>rowed and spring-toothed. |                      |                    |                         |                      |                  |                   |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 68.76606                                                                    |                      |                    |                         |                      |                  |                   |                 |                  |



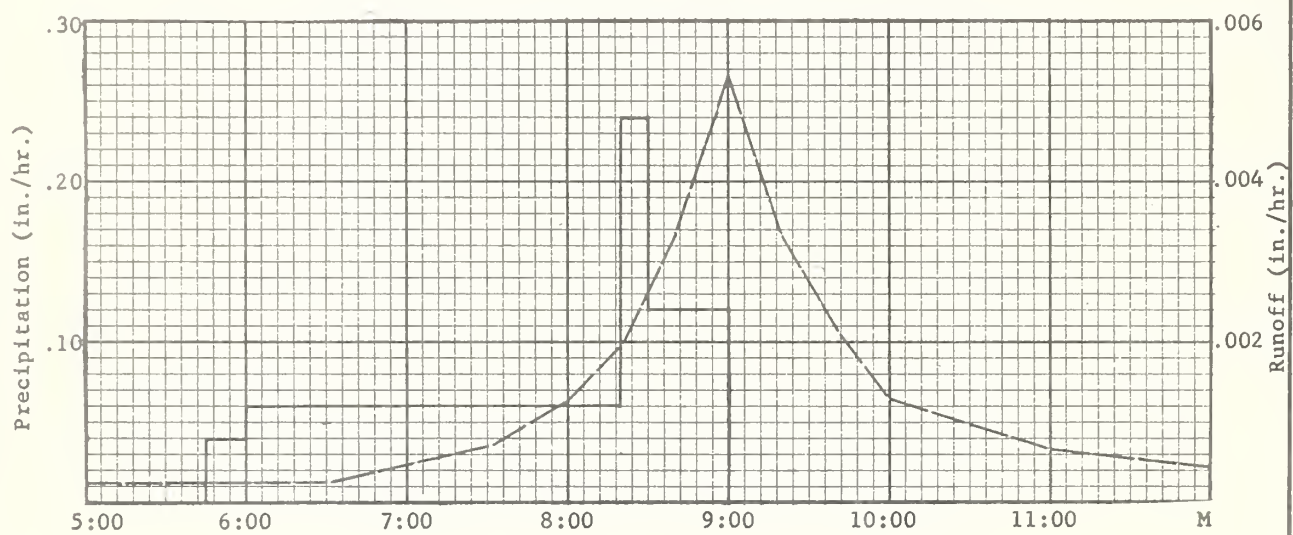
January 25, 1941 pm



March 3, 1941 pm

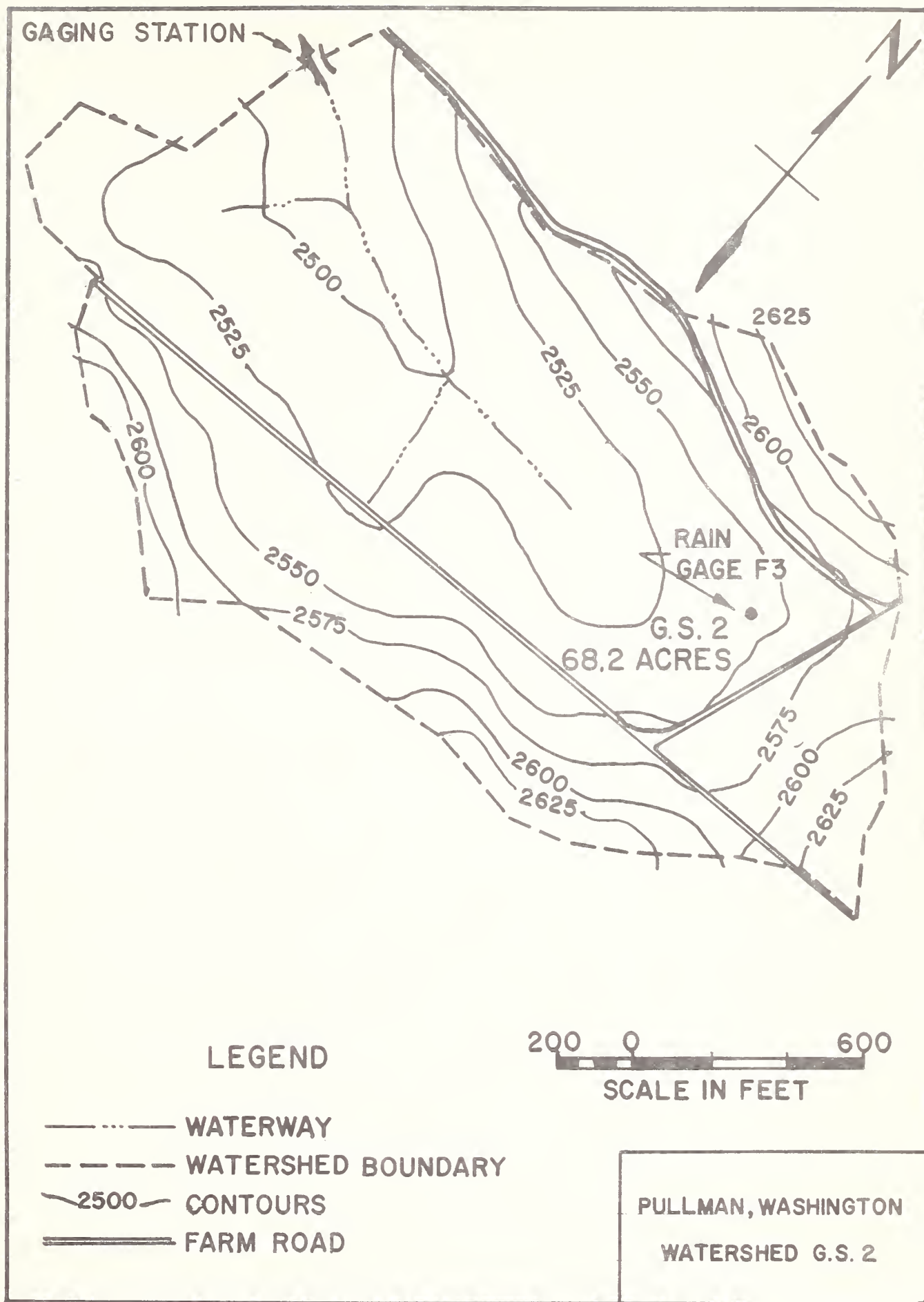
PULLMAN, WASHINGTON WATERSHED G.S. 2





April 20, 1943 pm

PULLMAN, WASHINGTON WATERSHED G.S. 2



SHEET 5 OF 5

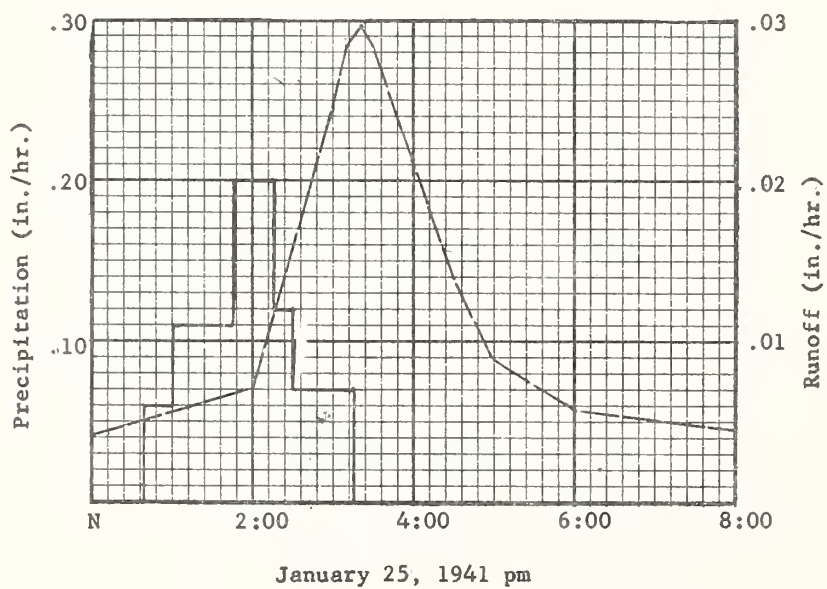
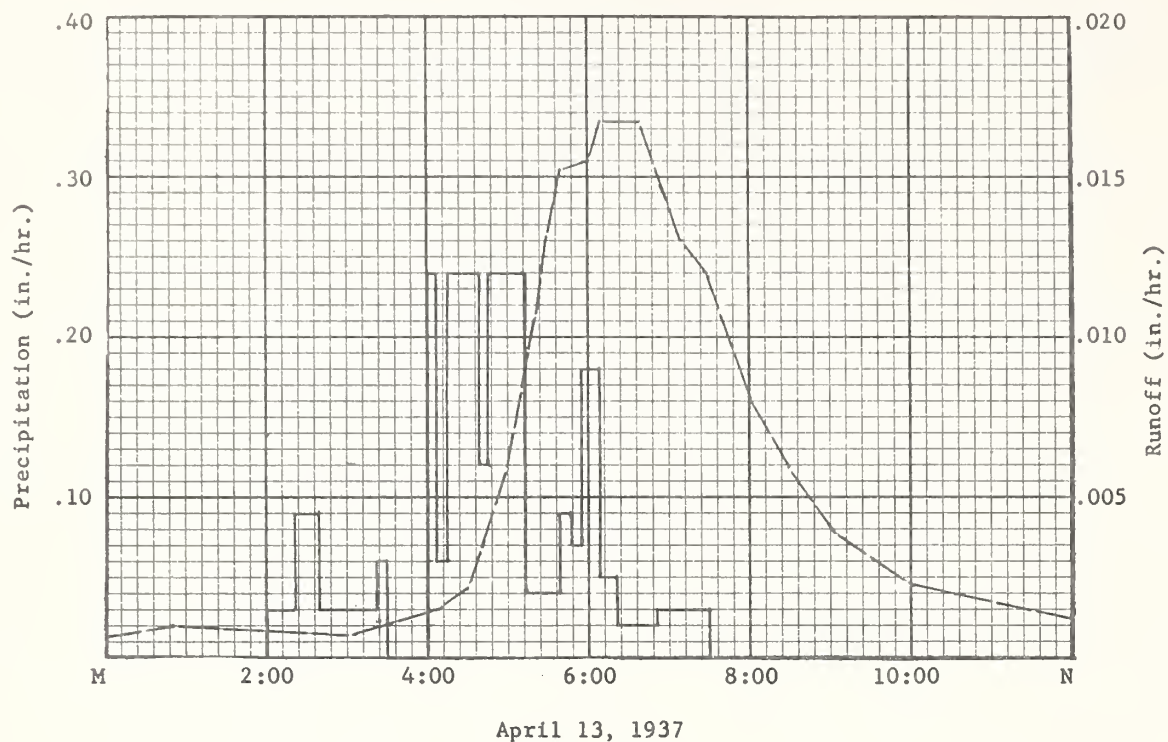


| Pullman, Washington                                                                                                                  |                   |                 | Watershed G.S. 8 (60.6) |                   |               | Area - 762 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|-------------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                |                   |                 | Rainfall                |                   |               | Runoff           |              |               |
| Date                                                                                                                                 | Rainfall (inches) | Runoff (inches) | Date and time           | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Event of April 13, 1937                                                                                                              |                   |                 |                         |                   |               |                  |              |               |
| 3-14-37                                                                                                                              | 0.06              | 0.018           | 4-13-37                 | Raingage          | W-8-R         | 4-13-37          |              |               |
| 3-15                                                                                                                                 | .42               | .049            | 2:00 a                  | 0                 | 0             | 12:00 M          | 0.0007       | 0             |
| 3-16                                                                                                                                 | 0                 | .040            | :20                     | .03               | .01           | :50 a            | .0010        | .001          |
| 3-17                                                                                                                                 | .27               | .036            | :40                     | .09               | .04           | 3:00             | .0007        | .003          |
| 3-18                                                                                                                                 | 0                 | .035            | 3:00                    | .03               | .05           | 4:10             | .0016        | .004          |
| 3-19                                                                                                                                 | 0                 | .019            | :20                     | .03               | .06           | :30              | .0022        | .005          |
| 3-20                                                                                                                                 | .20               | .014            | :30                     | .06               | .07           | 5:00             | .0059        | .007          |
| 3-21                                                                                                                                 | 0                 | .011            | 4:00                    | 0                 | .07           | :20              | .0106        | .010          |
| 3-22                                                                                                                                 | .02               | .007            | :05                     | .24               | .09           | :30              | .0132        | .012          |
| 3-23,29                                                                                                                              | 0                 | .054            | :15                     | .06               | .10           | :40              | .0152        | .014          |
| 3-30                                                                                                                                 | .15               | .015            | :40                     | .24               | .20           | 6:00             | .0155        | .019          |
| 3-31                                                                                                                                 | .15               | .011            | :45                     | .12               | .21           | :10              | .0167        | .022          |
| 4-1                                                                                                                                  | .38               | .040            | 5:12                    | .24               | .32           | :40              | .0167        | .030          |
| 4-2                                                                                                                                  | 0                 | .045            | :40                     | .04               | .34           | 7:10             | .0130        | .038          |
| 4-3                                                                                                                                  | .03               | .012            | :47                     | .09               | .35           | :30              | .0119        | .042          |
| 4-4                                                                                                                                  | .42               | .008            | :55                     | .07               | .36           | 8:00             | .0081        | .047          |
| 4-5                                                                                                                                  | 0                 | .012            | 6:08                    | .18               | .40           | :30              | .0059        | .050          |
| 4-6                                                                                                                                  | .18               | .026            | :20                     | .05               | .41           | 9:00             | .0040        | .053          |
| 4-7                                                                                                                                  | 0                 | .004            | :50                     | .02               | .42           | 10:00            | .0023        | .057          |
| 4-8                                                                                                                                  | 0                 | .006            | 7:30e                   | .03               | .44           | 11:00            | .0064        | .058          |
| 4-9                                                                                                                                  | .26               | .019            |                         |                   |               | 12:30 p          | .0010        | .060          |
| 4-10                                                                                                                                 | .16               | .017            |                         |                   |               | 5:00             | .0006        | .064          |
| 4-11                                                                                                                                 | 0                 | .009            |                         |                   |               |                  |              |               |
| 4-12                                                                                                                                 | .10               | .003            |                         |                   |               |                  |              |               |
| Watershed Conditions:<br>Approximately 95% of watershed in winter wheat 3-6" tall, planted 10/36. 5% pasture, farmstead, roads, etc. |                   |                 |                         |                   |               |                  |              |               |
| Event of January 25, 1941                                                                                                            |                   |                 |                         |                   |               |                  |              |               |
| 12-26-40                                                                                                                             | 0.31              | 0.027           | 1-25-41                 | Raingage          | W-8-R         | 1-25-41          |              |               |
| 12-27                                                                                                                                | .26               | .068            | 12:40 p                 | 0                 | 0             | 12:00 N          | 0.0041       | 0             |
| 12-28                                                                                                                                | 0                 | .082            | 1:00                    | .06               | .02           | 2:00 p           | .0071        | .0112         |
| 12-29                                                                                                                                | 0                 | .004            | :45                     | .11               | .10           | 3:00             | .0245        | .0269         |
| 12-30                                                                                                                                | .14               | .014            | 2:15                    | .20               | .20           | :10              | .0284        | .0313         |
| 12-31,1-3                                                                                                                            | 0                 | .019            | :30                     | .12               | .23           | :20              | .0297        | .0361         |
| 1-4                                                                                                                                  | .10               | .006            | 3:15e                   | .07               | .28           | :30              | .0284        | .0410         |
| 1-5                                                                                                                                  | .38               | .010            |                         |                   |               | :50              | .0232        | .0496         |
| 1-6                                                                                                                                  | 0                 | .005            |                         |                   |               | 4:10             | .0187        | .0466         |
| 1-7                                                                                                                                  | .26               | .004            |                         |                   |               | :30              | .0139        | .0620         |
| 1-8,12                                                                                                                               | 0                 | .026            |                         |                   |               | 5:00             | .0089        | .0677         |
| 1-13                                                                                                                                 | .01               | .008            |                         |                   |               | 6:00             | .0058        | .0750         |
| 1-14                                                                                                                                 | .20               | .017            |                         |                   |               | 8:00             | .0045        | .0853         |
| 1-15,16                                                                                                                              | 0                 | .023            |                         |                   |               |                  |              |               |
| 1-17                                                                                                                                 | .46               | .030            |                         |                   |               |                  |              |               |
| 1-18                                                                                                                                 | .39               | .155            |                         |                   |               |                  |              |               |
| 1-19                                                                                                                                 | .02               | .092            |                         |                   |               |                  |              |               |
| 1-20,23                                                                                                                              | 0                 | .199            |                         |                   |               |                  |              |               |
| 1-24                                                                                                                                 | .21               | .068            |                         |                   |               |                  |              |               |
| 1-25 to                                                                                                                              |                   |                 |                         |                   |               |                  |              |               |
| 12:00 N                                                                                                                              | .03               | .031            |                         |                   |               |                  |              |               |
| Watershed Conditions:<br>Watershed area seeded to winter wheat. Watershed had no snow cover or frost on ground.                      |                   |                 |                         |                   |               |                  |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 768.3246                                                                       |                   |                 |                         |                   |               |                  |              |               |

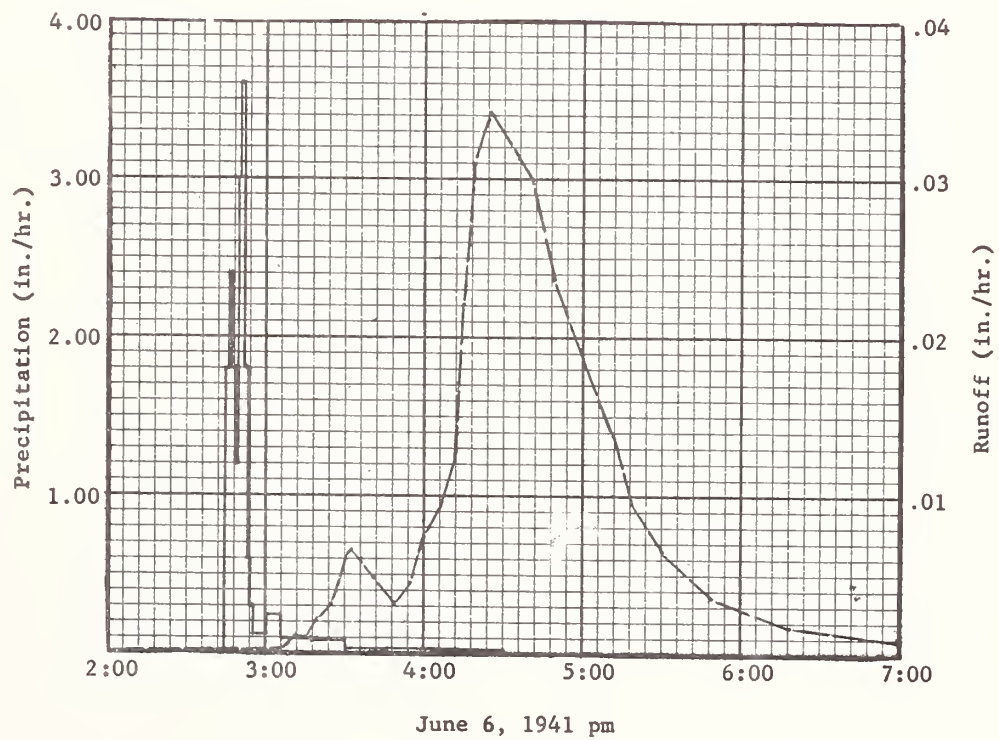
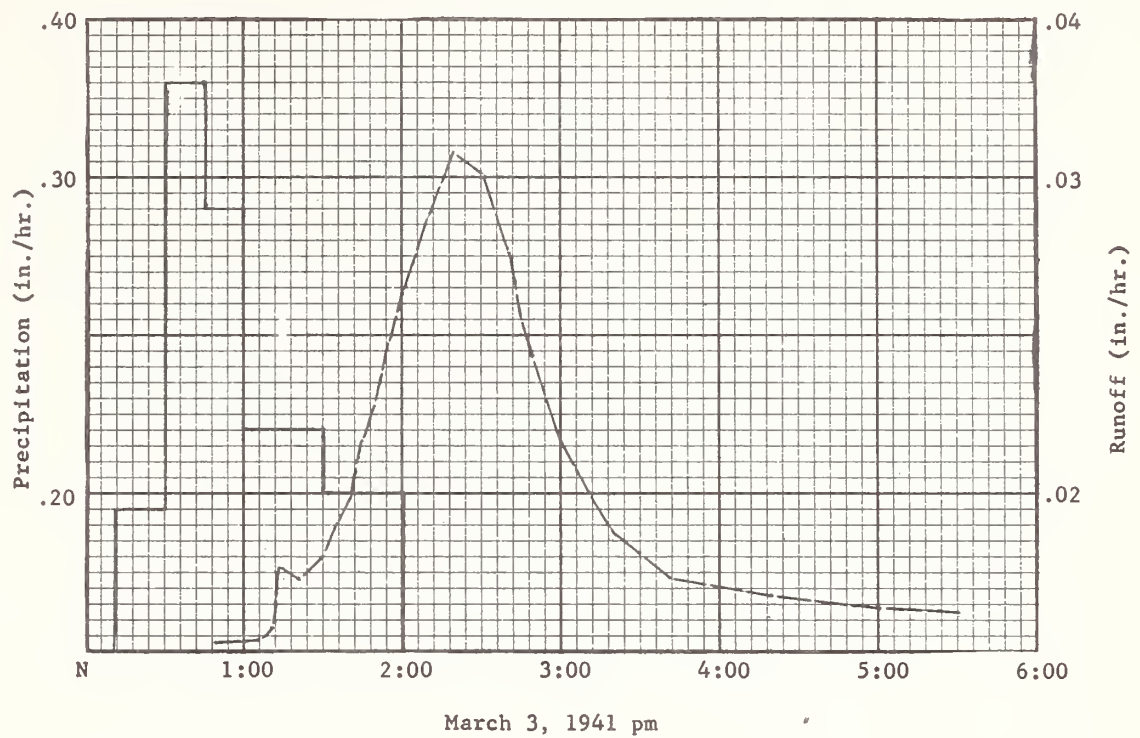


| Pullman, Washington                                                                              |                      |                    | Watershed G.S. 8 (60.6) |                      |                  | Area - 762 acres |                 |                  |
|--------------------------------------------------------------------------------------------------|----------------------|--------------------|-------------------------|----------------------|------------------|------------------|-----------------|------------------|
| Antecedent conditions                                                                            |                      |                    | Rainfall                |                      |                  | Runoff           |                 |                  |
| Date                                                                                             | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time        | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of March 3, 1941                                                                           |                      |                    |                         |                      |                  |                  |                 |                  |
| 2-1-41                                                                                           | 0.14                 | 0.037              | 3-3-41                  | Raingage             | W-8-R            | 3-3-41           |                 |                  |
| 2-2                                                                                              | 0                    | .023               | 12:10 p                 | 0                    | 0                | 12:50 p          | 0.0005          | 0                |
| 2-3                                                                                              | 0                    | .018               | :30                     | .09                  | .03              | 1:00             | .0006           | .0001            |
| 2-4                                                                                              | 0                    | .016               | :45                     | .36                  | .12              | :05              | .0008           | .0002            |
| 2-5                                                                                              | 0                    | .013               | 1:00                    | .28                  | .19              | :10              | .0016           | .0003            |
| 2-6                                                                                              | 0                    | .012               | :30                     | .14                  | .26              | :12              | .0031           | .0003            |
| 2-7                                                                                              | .13                  | .024               | 2:00e                   | .10                  | .31              | :15              | .0053           | .0006            |
| 2-8                                                                                              | 0                    | .016               |                         |                      |                  | :21              | .0045           | .0010            |
| 2-9                                                                                              | .11                  | .022               |                         |                      |                  | :30              | .0060           | .0018            |
| 2-10                                                                                             | .21                  | .040               |                         |                      |                  | :35              | .0081           | .0024            |
| 2-11                                                                                             | .13                  | .034               |                         |                      |                  | :40              | .0096           | .0032            |
| 2-12, 22                                                                                         | 0                    | .140               |                         |                      |                  | :45              | .0134           | .0041            |
| 2-23                                                                                             | .06                  | .011               |                         |                      |                  | :50              | .0155           | .0054            |
| 2-24                                                                                             | .27                  | .035               |                         |                      |                  | :55              | .0194           | .0068            |
| 2-25                                                                                             | 0                    | .024               |                         |                      |                  | 2:00             | .0227           | .0086            |
| 2-26                                                                                             | 0                    | .013               |                         |                      |                  | :10              | .0277           | .0128            |
| 2-27                                                                                             | .03                  | .010               |                         |                      |                  | :20              | .0316           | .0177            |
| 2-28                                                                                             | .17                  | .027               |                         |                      |                  | :30              | .0303           | .0228            |
| 3-1                                                                                              | .17                  | .031               |                         |                      |                  | :40              | .0251           | .0274            |
| 3-2                                                                                              | .02                  | .020               |                         |                      |                  | :45              | .0213           | .0294            |
| 3-3 to                                                                                           |                      |                    |                         |                      |                  | :50              | .0187           | .0310            |
| 12:00 N                                                                                          | 0                    | .0063              |                         |                      |                  | 3:00             | .0134           | .0337            |
| <u>Watershed Conditions:</u><br>Watershed seeded to winter wheat.<br>No snow or frost on ground. |                      |                    |                         |                      |                  | :10              | .0100           | .0357            |
|                                                                                                  |                      |                    |                         |                      |                  | :20              | .0077           | .0371            |
|                                                                                                  |                      |                    |                         |                      |                  | :30              | .0063           | .0383            |
|                                                                                                  |                      |                    |                         |                      |                  | :40              | .0047           | .0392            |
|                                                                                                  |                      |                    |                         |                      |                  | 4:20             | .0036           | .0419            |
|                                                                                                  |                      |                    |                         |                      |                  | 5:00             | .0028           | .0441            |
|                                                                                                  |                      |                    |                         |                      |                  | :30              | .0026           | .0454            |
|                                                                                                  |                      |                    |                         |                      |                  |                  |                 |                  |
|                                                                                                  |                      |                    |                         |                      |                  |                  |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 768.3246                                   |                      |                    |                         |                      |                  |                  |                 |                  |

| Pullman, Washington                                                                                                                                                            |                   |                 | Watershed G.S. 8 (60.6) |                   |               | Area - 762 acres |              |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|-------------------------|-------------------|---------------|------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                          |                   |                 | Rainfall                |                   |               | Runoff           |              |               |
| Date                                                                                                                                                                           | Rainfall (inches) | Runoff (inches) | Date and time           | Intensity (in/hr) | Acc. (inches) | Date and time    | Rate (in/hr) | Acc. (inches) |
| Event of June 6, 1941                                                                                                                                                          |                   |                 |                         |                   |               |                  |              |               |
| 5-7-41                                                                                                                                                                         | 0.11              | 0.002           | 6-6-41                  | Raingage          | W-8-R         | 6-6-41           |              |               |
| 5-8                                                                                                                                                                            | .10               | .003            | 2:45 p                  | 0                 | 0             | 2:00 p           | 0            | 0             |
| 5-9,11                                                                                                                                                                         | 0                 | .004            | :46                     | 1.80              | .03           | :50              | .0001        | .0001         |
| 5-12                                                                                                                                                                           | .05               | .001            | :47                     | 2.40              | .07           | 3:00             | .0002        | .0001         |
| 5-13                                                                                                                                                                           | .43               | .003            | :48                     | 1.80              | .10           | :05              | .0002        | .0001         |
| 5-14                                                                                                                                                                           | 0                 | .002            | :49                     | 1.20              | .12           | :08              | .0006        | .0001         |
| 5-15                                                                                                                                                                           | 0                 | .001            | :50                     | 3.00              | .17           | :10              | .0011        | .0002         |
| 5-16                                                                                                                                                                           | .20               | .002            | :51                     | 3.60              | .23           | :15              | .0011        | .0003         |
| 5-17                                                                                                                                                                           | 1.14              | .047            | :52                     | 1.80              | .26           | :20              | .0023        | .0004         |
| 5-18                                                                                                                                                                           | .03               | .008            | :53                     | .60               | .27           | :25              | .0032        | .0006         |
| 5-19,25                                                                                                                                                                        | 0                 | .017            | :55                     | .30               | .28           | :27              | .0039        | .0008         |
| 5-26                                                                                                                                                                           | .16               | .002            | 3:00                    | .12               | .29           | :30              | .0060        | .0010         |
| 5-27                                                                                                                                                                           | .29               | .003            | :05                     | .24               | .31           | :33              | .0065        | .0013         |
| 5-28                                                                                                                                                                           | .53               | .003            | :17                     | .10               | .33           | :36              | .0058        | .0016         |
| 5-29                                                                                                                                                                           | .13               | .003            | :30                     | .09               | .35           | :40              | .0049        | .0019         |
| 5-30                                                                                                                                                                           | 0                 | .005            | 4:00                    | .02               | .36           | :50              | .0032        | .0026         |
| 5-31                                                                                                                                                                           | .12               | .005            | :30e                    | .02               | .37           | :55              | .0045        | .0029         |
| 6-1                                                                                                                                                                            | 0                 | .002            |                         |                   |               | 4:00             | .0074        | .0034         |
| 6-2                                                                                                                                                                            | .02               | .001            |                         |                   |               | :05              | .0092        | .0041         |
| 6-3,5                                                                                                                                                                          | 0                 | .003            |                         |                   |               | :10              | .0124        | .0050         |
| 6-6 to                                                                                                                                                                         |                   |                 |                         |                   |               | :15              | .0221        | .0065         |
| 2:00 p                                                                                                                                                                         | .01               | .0004           |                         |                   |               | :20              | .0310        | .0087         |
| <u>Watershed Conditions:</u><br>33% of watershed area was in peas 6" high, 33% in winter wheat 24-30" high. 33% in spring wheat and oats 8-10" high. 4 acres alfalfa 18" high. |                   |                 |                         |                   |               | :25              | .0342        | .0115         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :40              | .0297        | .0195         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :50              | .0238        | .0239         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | 5:00             | .0187        | .0274         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :10              | .0139        | .0301         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :20              | .0096        | .0321         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :30              | .0065        | .0334         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | :50              | .0034        | .0351         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | 6:20             | .0018        | .0364         |
|                                                                                                                                                                                |                   |                 |                         |                   |               | 7:00             | .0009        | .0373         |
| Notes: To convert runoff in in/hr to cfs, multiply by 768.3246                                                                                                                 |                   |                 |                         |                   |               |                  |              |               |

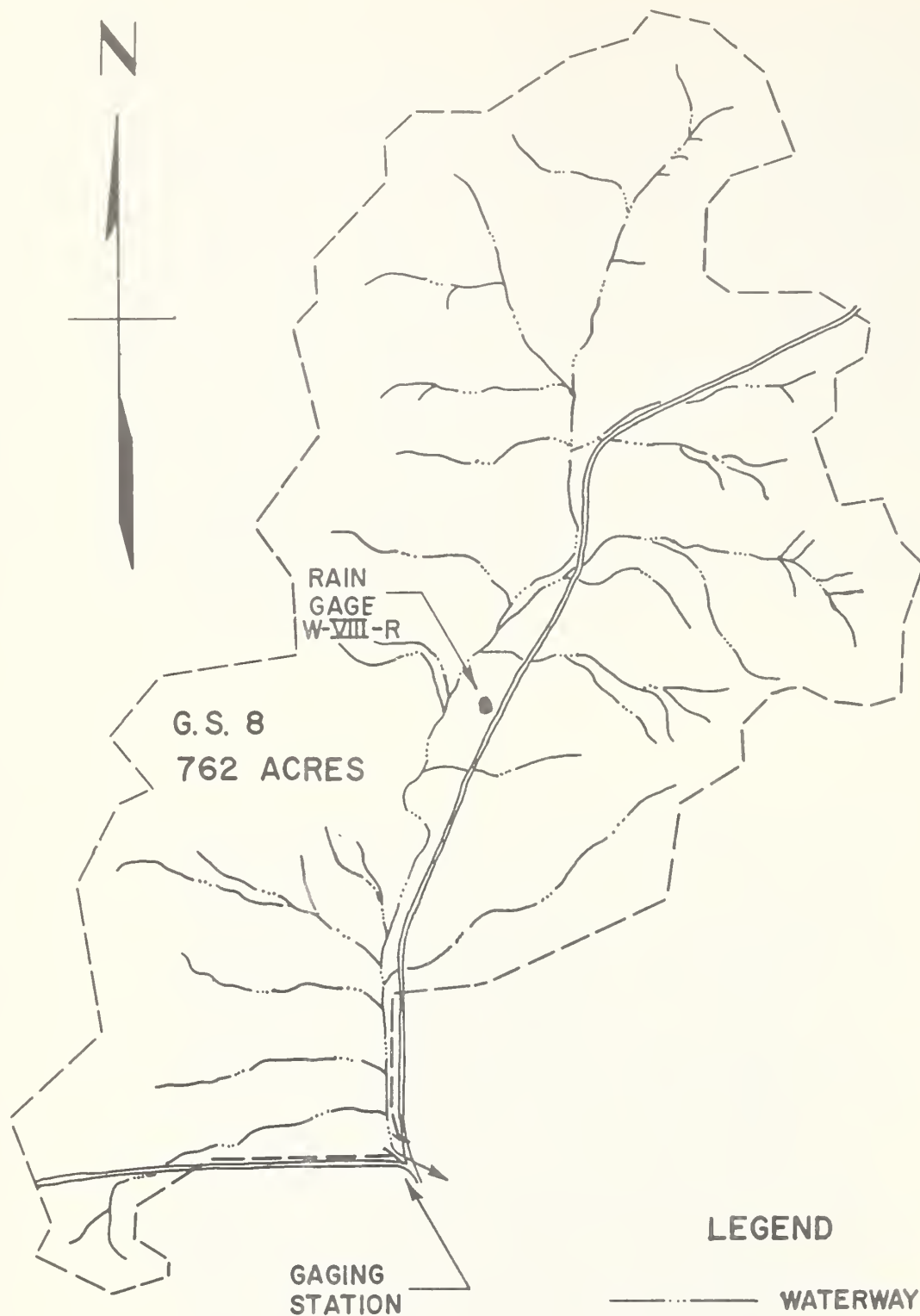


PULLMAN, WASHINGTON WATERSHED G.S. 8


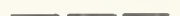


PULLMAN, WASHINGTON WATERSHED G.S. 8





### LEGEND

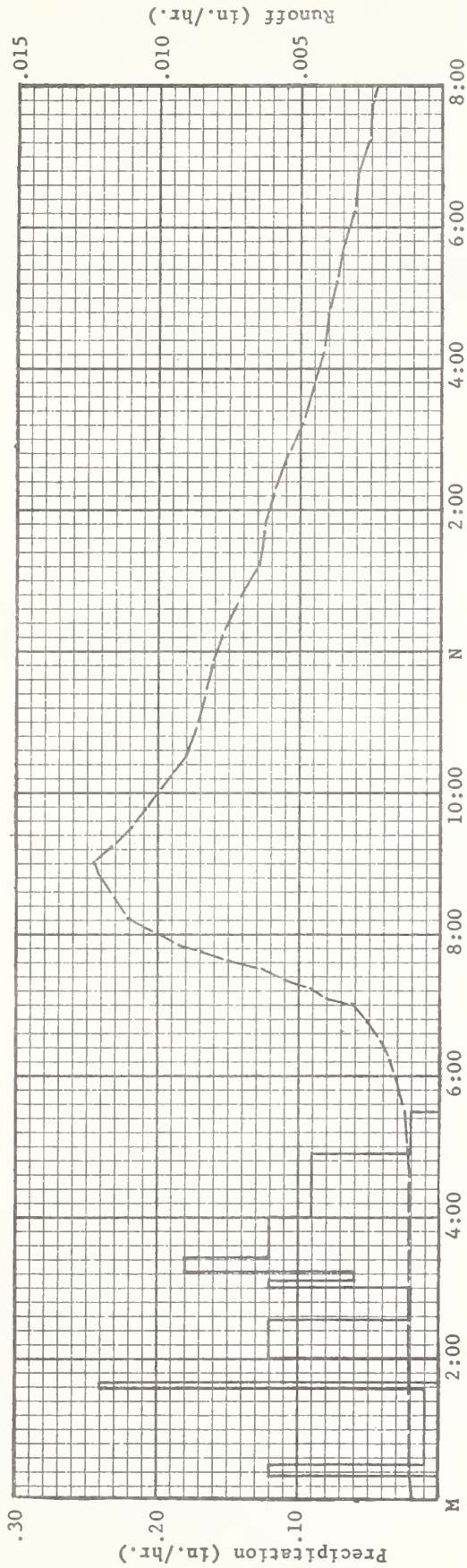
-  WATERWAY
-  WATERSHED BOUNDARY
-  FARM ROAD



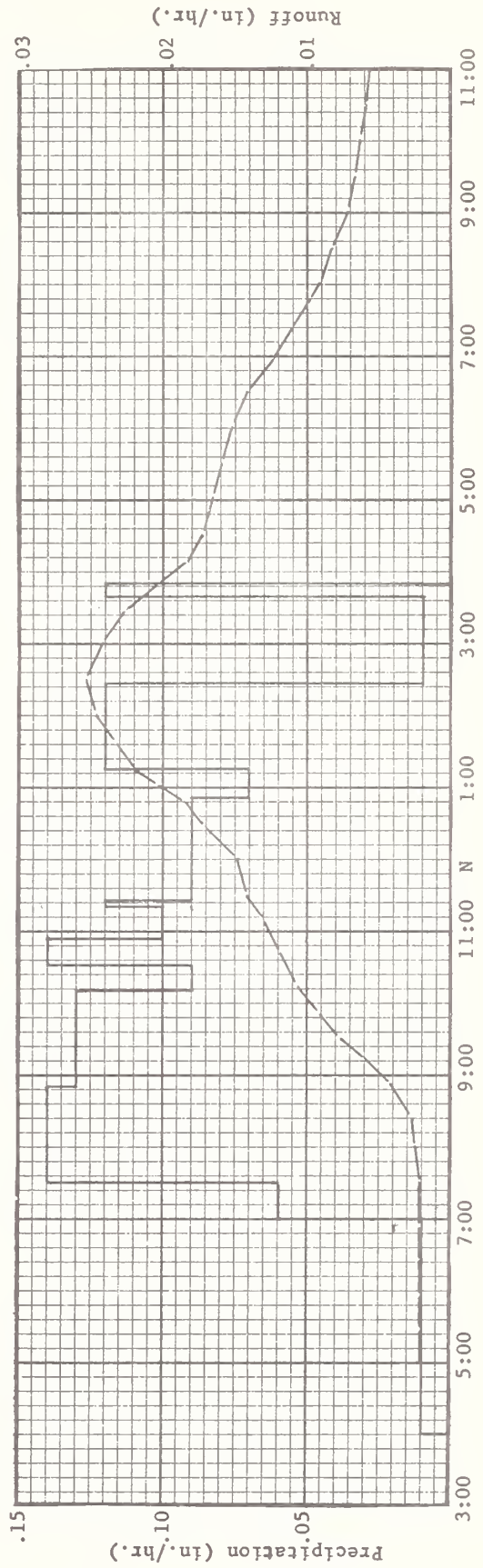
PULLMAN, WASHINGTON  
WATERSHED G.S. 8

| Pullman, Washington                                                                                                                                                                                                                                                                 |                   |                 | Watershed G.S. 10 (60.8)  |                   |               | Area - 4,430 acres |              |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|---------------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                                                                               |                   |                 | Rainfall                  |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                                                                                                                | Rainfall (inches) | Runoff (inches) | Date and time             | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| 1-19-42                                                                                                                                                                                                                                                                             | 0.35              | 0.001           | Event of February 1, 1942 |                   |               |                    |              |               |
| 1-20                                                                                                                                                                                                                                                                                | 0                 | .001            | 2-1-42                    | Raingage          | R-2           | 2-1-42             |              |               |
| 1-21,22                                                                                                                                                                                                                                                                             | 0                 | .001            | 12:20 a                   | 0                 | 0             | 12:00 M            | 0.0009       | 0             |
| 1-23                                                                                                                                                                                                                                                                                | .05               | .001            | :30                       | .12               | .02           | 1:30 a             | .0010        | .0164         |
| 1-24                                                                                                                                                                                                                                                                                | 0                 | .008            | 1:35                      | .01               | .03           | 3:00               | .0012        | .0180         |
|                                                                                                                                                                                                                                                                                     |                   |                 | :40                       | .24               | .05           | 4:30               | .0012        | .0198         |
| 1-25                                                                                                                                                                                                                                                                                | .01               | .031            | 2:00                      | 0                 | .05           | 5:30               | .0013        | .0211         |
| 1-26                                                                                                                                                                                                                                                                                | .09               | .034            | :35                       | .12               | .12           | 6:00               | .0016        | .0218         |
| 1-27                                                                                                                                                                                                                                                                                | .64               | .168            | 3:00                      | .02               | .13           | :15                | .0018        | .0222         |
| 1-28                                                                                                                                                                                                                                                                                | .07               | .046            | :05                       | .12               | .14           | :30                | .0022        | .0227         |
| 1-29                                                                                                                                                                                                                                                                                | 0                 | .025            | :15                       | .06               | .15           | :45                | .0026        | .0233         |
| 1-30                                                                                                                                                                                                                                                                                | 0                 | .012            | :25                       | .18               | .18           | 7:00               | .0032        | .0241         |
| 1-31                                                                                                                                                                                                                                                                                | .12               | .015            | :40                       | .12               | .21           | :07                | .0040        | .0245         |
| <u>Watershed Conditions:</u><br>Watershed in general was in plowed condition or in winter wheat. About 1% of area in farmstead and hay field. Approximately 10% was standing wheat stubble and some first-year sweet clover. $1\frac{1}{2}$ " of frost on ground but no snow cover. |                   |                 | :50                       | .12               | .23           | :15                | .0046        | .0250         |
|                                                                                                                                                                                                                                                                                     |                   |                 | 4:00                      | .12               | .25           | :22                | .0054        | .0256         |
|                                                                                                                                                                                                                                                                                     |                   |                 | :55                       | .09               | .33           | :30                | .0063        | .0264         |
|                                                                                                                                                                                                                                                                                     |                   |                 | 5:30 e                    | .02               | .34           | :37                | .0074        | .0272         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0084        | .0283         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :52                | .0093        | .0293         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 8:00               | .0100        | .0306         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :15                | .0111        | .0332         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :30                | .0115        | .0360         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0120        | .0390         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 9:00               | .0123        | .0420         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :15                | .0117        | .0450         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :30                | .0109        | .0478         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0104        | .0505         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 10:00              | .0100        | .0531         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :15                | .0096        | .0555         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :30                | .0091        | .0579         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 11:00              | .0086        | .0623         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0082        | .0686         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 12:15 p            | .0078        | .0726         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0072        | .0764         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 1:15               | .0064        | .0799         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0063        | .0832         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 2:15               | .0059        | .0862         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0054        | .0890         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 3:15               | .0049        | .0916         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0045        | .0940         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 4:15               | .0042        | .0961         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0040        | .0982         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 5:15               | .0038        | .1001         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0034        | .1019         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 6:15               | .0032        | .1036         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0029        | .1051         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 7:15               | .0026        | .1065         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | :45                | .0024        | .1078         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 8:15               | .0022        | .1089         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 9:00               | .0021        | .1105         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 10:00              | .0018        | .1125         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 11:00              | .0016        | .1142         |
|                                                                                                                                                                                                                                                                                     |                   |                 |                           |                   |               | 12:00 M            | .0015        | .1158         |
| Notes: To convert runoff in in/hr to cfs, multiply by 4466.769                                                                                                                                                                                                                      |                   |                 |                           |                   |               |                    |              |               |

| Pullman, Washington                                                                                                                                                                                                                                                 |                      |                    | Watershed G.S. 10 (60.8) |                      |                  | Area - 4,430 acres |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------|----------------------|------------------|--------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                                               |                      |                    | Rainfall                 |                      |                  | Runoff             |                 |                  |
| Date                                                                                                                                                                                                                                                                | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time         | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time   | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of January 25-26, 1947                                                                                                                                                                                                                                        |                      |                    |                          |                      |                  |                    |                 |                  |
| 12-27-46                                                                                                                                                                                                                                                            | 0.20                 | 0                  | 1-25-47                  | Raingage             | R-2              | 1-25-47            |                 |                  |
| 12-28                                                                                                                                                                                                                                                               | .11                  | 0                  | 4:00 a                   | 0                    | 0                | 5:00 a             | 0.0020          | 0                |
| 12-31                                                                                                                                                                                                                                                               | .07                  | 0                  | 7:00                     | .01                  | .02              | 7:30               | .0022           | .0053            |
| 1-5                                                                                                                                                                                                                                                                 | .24                  | 0                  | :30                      | .06                  | .05              | 8:00               | .0025           | .0065            |
| 1-10                                                                                                                                                                                                                                                                | .16                  | 0                  | 8:00                     | .14                  | .12              | :23                | .0028           | .0075            |
| 1-12                                                                                                                                                                                                                                                                | .04                  | 0                  | :50                      | .14                  | .24              | :52                | .0041           | .0092            |
| 1-13                                                                                                                                                                                                                                                                | .20                  | 0                  | 10:10                    | .13                  | .42              | 9:15               | .0059           | .0111            |
| 1-14                                                                                                                                                                                                                                                                | .02                  |                    | :30                      | .09                  | .45              | :30                | .0076           | .0128            |
| 1-20                                                                                                                                                                                                                                                                | .12                  | .001               | :55                      | .14                  | .51              | 10:15              | .0107           | .0197            |
| 1-21                                                                                                                                                                                                                                                                | 0                    | .003               | 11:20                    | .10                  | .55              | 11:15              | .0131           | .0315            |
| 1-22                                                                                                                                                                                                                                                                | .30                  | .004               | :25                      | .12                  | .56              | :30                | .0142           | .0349            |
| 1-23                                                                                                                                                                                                                                                                | .41                  | .162               | 12:50 p                  | .09                  | .69              | 12:00 N            | .0149           | .0422            |
| 1-24                                                                                                                                                                                                                                                                | .11                  | .128               | 1:15                     | .07                  | .72              | :30 p              | .0173           | .0503            |
| 1-25 to                                                                                                                                                                                                                                                             |                      |                    | 2:25                     | .12                  | .86              | :45                | .0184           | .0548            |
| 4:00 a                                                                                                                                                                                                                                                              | 0                    | .017               | 3:40                     | .01                  | .87              | 1:15               | .0218           | .0649            |
| <u>Watershed Conditions:</u><br>Watershed in general was in plowed condition or in winter wheat. 15% in standing wheat stubble. About 1% of area in farmstead, roads, etc. 1% in alfalfa. Some first-year sweet clover. No snow cover on north slopes and no frost. |                      |                    | :50e                     | .12                  | .89              | 2:00               | .0246           | .0824            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0252           | .0948            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 3:00               | .0243           | .1072            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0224           | .1189            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 4:08               | .0184           | .1319            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0173           | .1385            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 6:00               | .0154           | .1629            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0142           | .1703            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 7:00               | .0123           | .1768            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :45                | .0100           | .1851            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 8:00               | .0093           | .1875            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0083           | .1919            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 9:00               | .0073           | .1958            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0068           | .1993            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 10:00              | .0063           | .2026            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | :30                | .0059           | .2057            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 11:00              | .0057           | .2086            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 1-26-47            |                 |                  |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 2:00 a             | .0052           | .2246            |
|                                                                                                                                                                                                                                                                     |                      |                    |                          |                      |                  | 3:30               | .0049           | .2322            |
| Notes: To convert runoff in in/hr to cfs, multiply by 4466.769                                                                                                                                                                                                      |                      |                    |                          |                      |                  |                    |                 |                  |



February 1, 1942

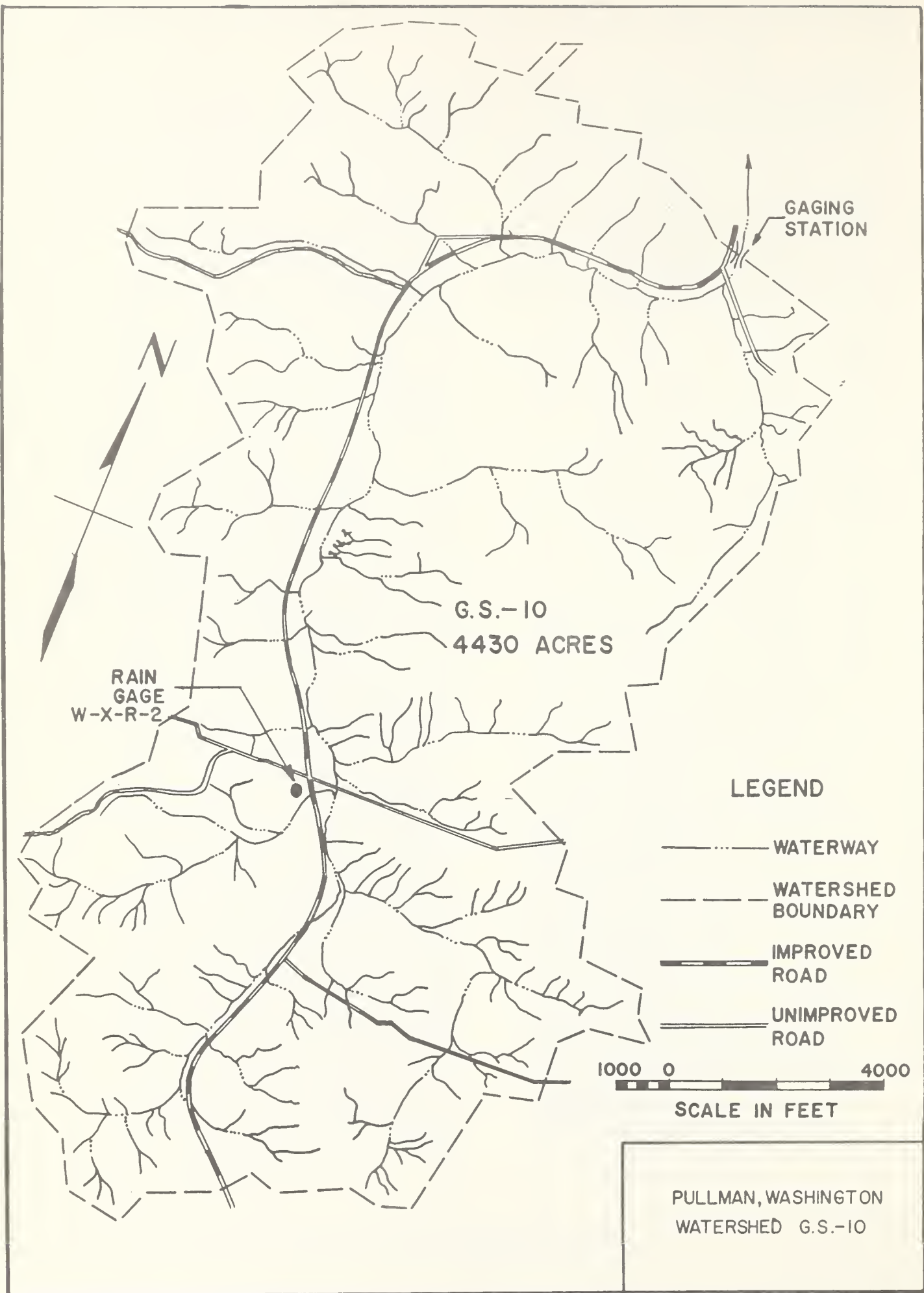


January 25, 1947

PULLMAN, WASHINGTON

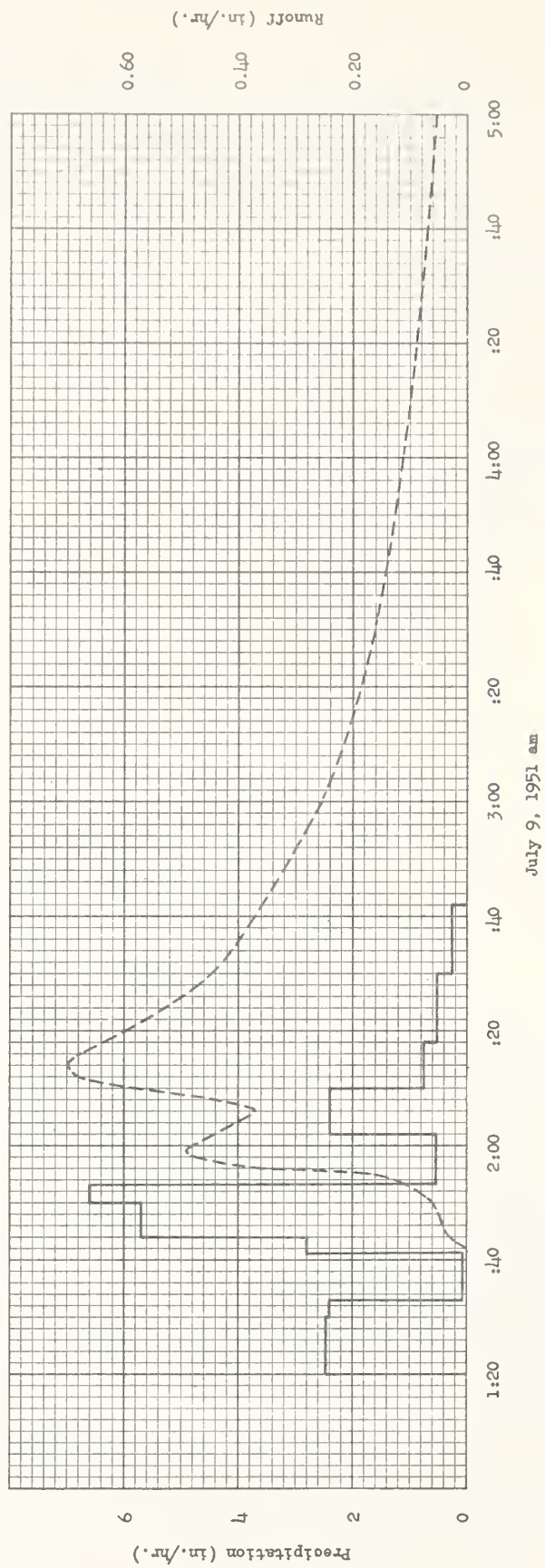
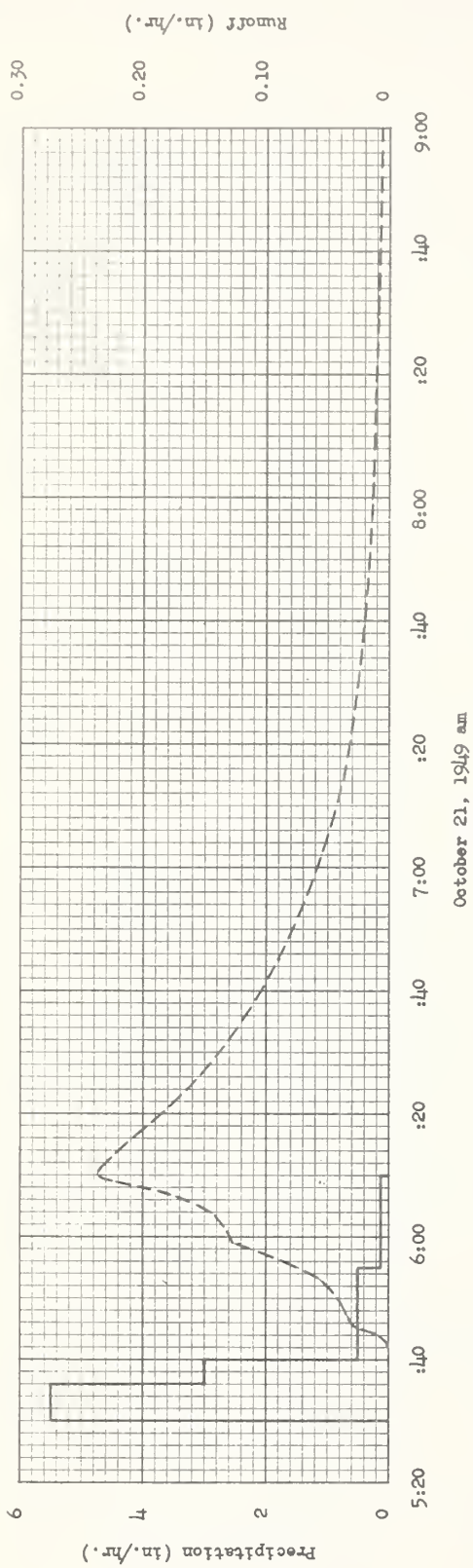
WATERSHED G.S. 10



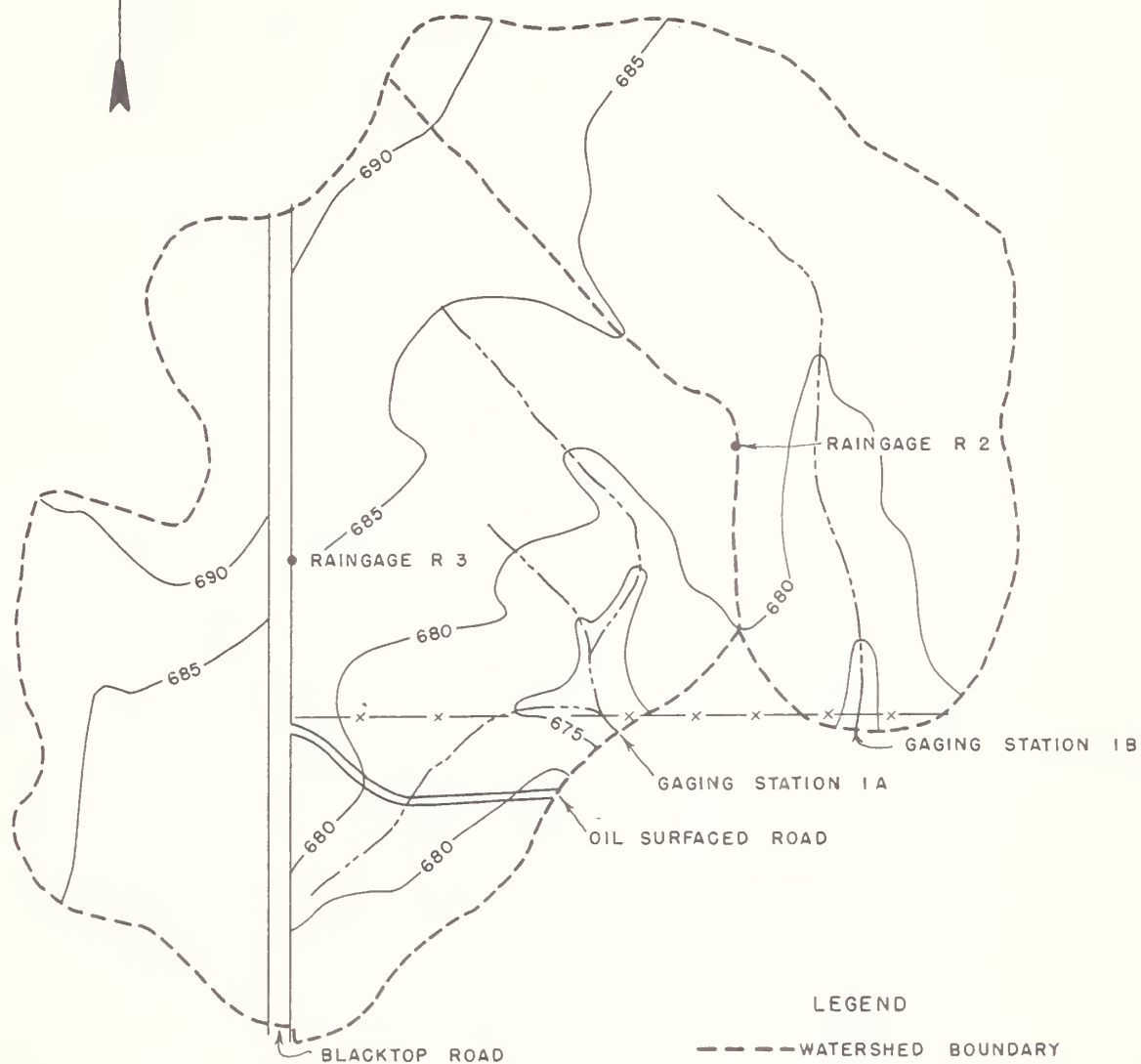


| Monticello, Illinois                                                                                                                            |                      |                    | Watershed I A    |                      |                  | (61.1) Area - 82.0 Acres |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|------------------|----------------------|------------------|--------------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                           |                      |                    | Rainfall         |                      |                  | Runoff                   |                 |                  |
| Date                                                                                                                                            | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time         | Rate<br>(in/hr) | Acc.<br>(inches) |
| Event of October 21, 1949                                                                                                                       |                      |                    |                  |                      |                  |                          |                 |                  |
| 9-21-49                                                                                                                                         | 0.04                 | 0                  | 10-21-49         | Raingage             | R-3              | 10-21-49                 |                 |                  |
| 10-2                                                                                                                                            | 1.80                 | .001               | 5:30a            | 0                    | 0                | 5:42a                    | 0               | 0                |
| 10-3                                                                                                                                            | .77                  | .045               | :36              | 5.50                 | .55              | :45                      | .0236           | T                |
| 10-5                                                                                                                                            | .30                  | 0                  | :40              | 3.00                 | .75              | :50                      | .0417           | .003             |
| 10-6                                                                                                                                            | .85                  | .030               | :55              | .48                  | .87              | :55                      | .0727           | .008             |
| 10-10                                                                                                                                           | .68                  | .002               | 6:10             | .12                  | .90              | :57                      | .0991           | .011             |
| 10-11                                                                                                                                           | 1.42                 | .153               |                  |                      |                  | :59                      | .127            | .014             |
| 10-20                                                                                                                                           | .60                  | 0                  |                  |                      |                  | 6:04                     | .144            | .026             |
| Watershed Conditions: 49.5%<br>of area was in meadow, 19.3% in<br>corn, 14.4% in grass, 13.2% in<br>clover, and 3.2% in roads.                  |                      |                    |                  |                      |                  | :06                      | .166            | .031             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :08                      | .204            | .037             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :10                      | .237            | .044             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :15                      | .214            | .063             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :30                      | .139            | .107             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :45                      | .0895           | .143             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 7:00                     | .0580           | .161             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :15                      | .0363           | .173             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :30                      | .0248           | .180             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 8:00                     | .0139           | .190             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 9:00                     | .0066           | .200             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 10:00                    | .0037           | .205             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 12:00                    | .0015           | .210             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 5:00                     | 0               | .212             |
| Event of July 9, 1951                                                                                                                           |                      |                    |                  |                      |                  |                          |                 |                  |
| 6-12-51                                                                                                                                         | 0.25                 | 0                  | 7-9-51           | Raingage             | R-3              | 7-9-51                   |                 |                  |
| 6-16                                                                                                                                            | .34                  | 0                  | 1:20a            | 0                    | 0                | 1:42a                    | 0               | 0                |
| 6-19                                                                                                                                            | .21                  | 0                  | :30              | 2.46                 | .41              | :48                      | .0494           | .003             |
| 6-23                                                                                                                                            | .11                  | 0                  | :33              | 2.40                 | .53              | :52                      | .0866           | .007             |
| 6-24                                                                                                                                            | .60                  | 0                  | :41              | .08                  | .54              | :54                      | .131            | .011             |
| 6-25                                                                                                                                            | .07                  | 0                  | :44              | 2.80                 | .68              | :56                      | .355            | .018             |
| 6-26                                                                                                                                            | .12                  | 0                  | :50              | 5.70                 | 1.25             | :58                      | .479            | .032             |
| 6-27                                                                                                                                            | 3.01                 | .558               | :53              | 6.60                 | 1.58             | :59                      | .490            | .040             |
| 6-28                                                                                                                                            | .31                  | T                  | 2:02             | .53                  | 1.66             | 2:00                     | .479            | .048             |
| 6-30                                                                                                                                            | .03                  | 0                  | :10              | 2.40                 | 1.98             | :06                      | .370            | .090             |
| 7-3                                                                                                                                             | .80                  | .078               | :18              | .75                  | 2.08             | :08                      | .439            | .104             |
| 7-9                                                                                                                                             | .19                  | 0                  | :30              | .50                  | 2.18             | :10                      | .581            | .121             |
| Watershed Conditions: 38.4%<br>of area was in corn, 19.3% in<br>oats, 14.4% in grass, 13.6% in<br>wheat, 11.1% in meadow, and 3.2%<br>in roads. |                      |                    | :42              | .25                  | 2.23             | :12                      | .680            | .142             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :14                      | .700            | .165             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :16                      | .680            | .188             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :20                      | .600            | .231             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :30                      | .448            | .317             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :40                      | .370            | .385             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 3:00                     | .255            | .489             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | :30                      | .161            | .591             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 4:00                     | .113            | .659             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 5:00                     | .0535           | .740             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 6:00                     | .0236           | .776             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 7:00                     | .0113           | .793             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 9:00                     | .0037           | .807             |
|                                                                                                                                                 |                      |                    |                  |                      |                  | 3:00p                    | 0               | .814             |

Notes: To convert runoff in in/hr to cfs, multiply by 82.69 .



APPROXIMATE  
TRUE NORTH



LEGEND

- WATERSHED BOUNDARY
- WATERWAY
- X— FENCE
- 680— CONTOUR



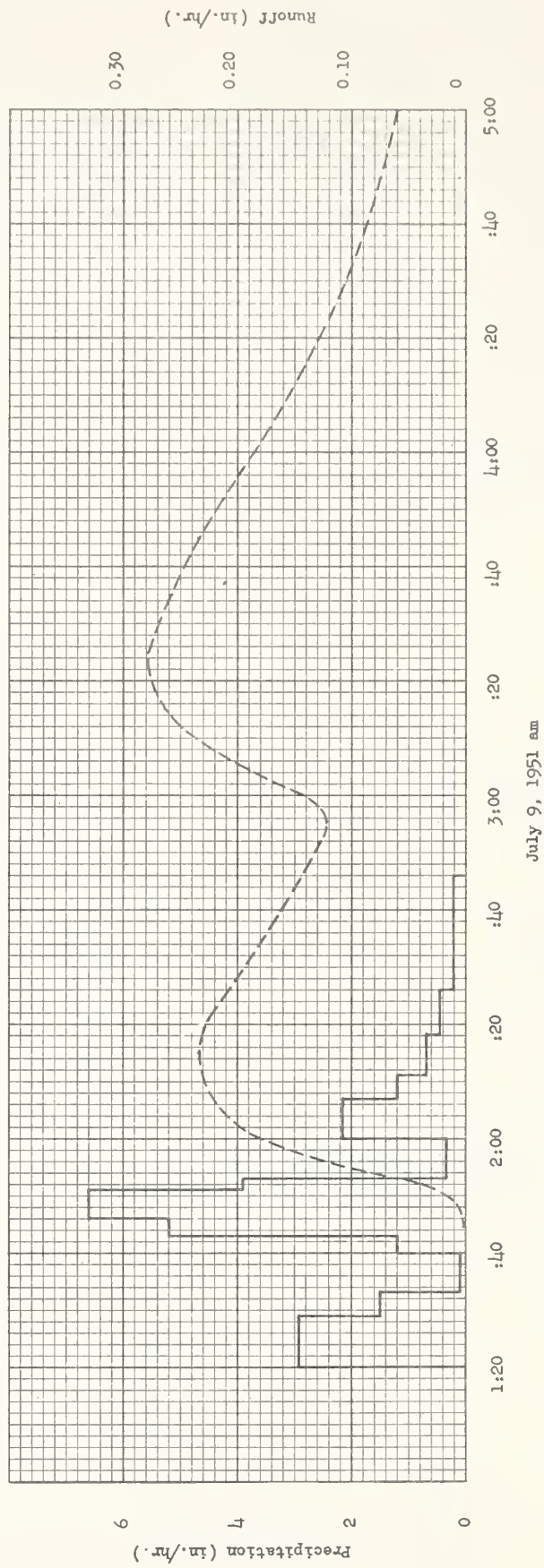
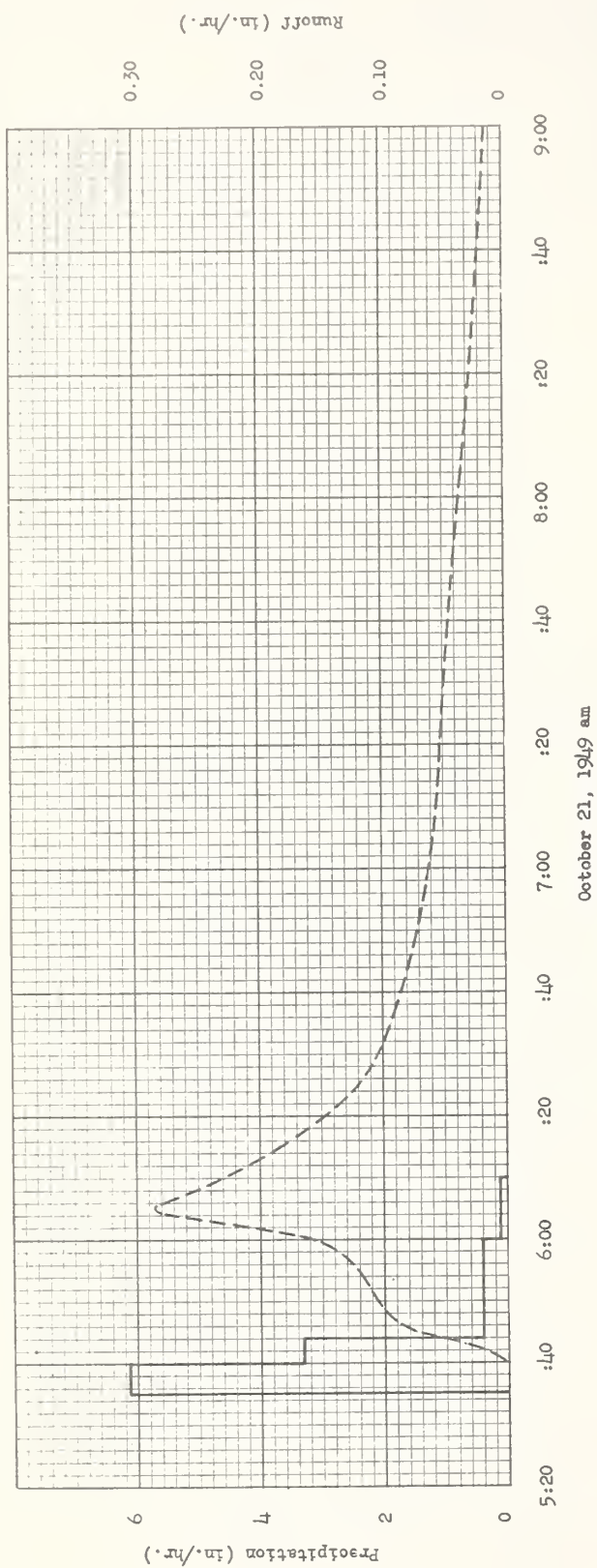
SCALE, IN FEET  
CONTOUR INTERVAL 5 FEET

MONTICELLO, ILLINOIS  
WATERSHEDS 1A & 1B





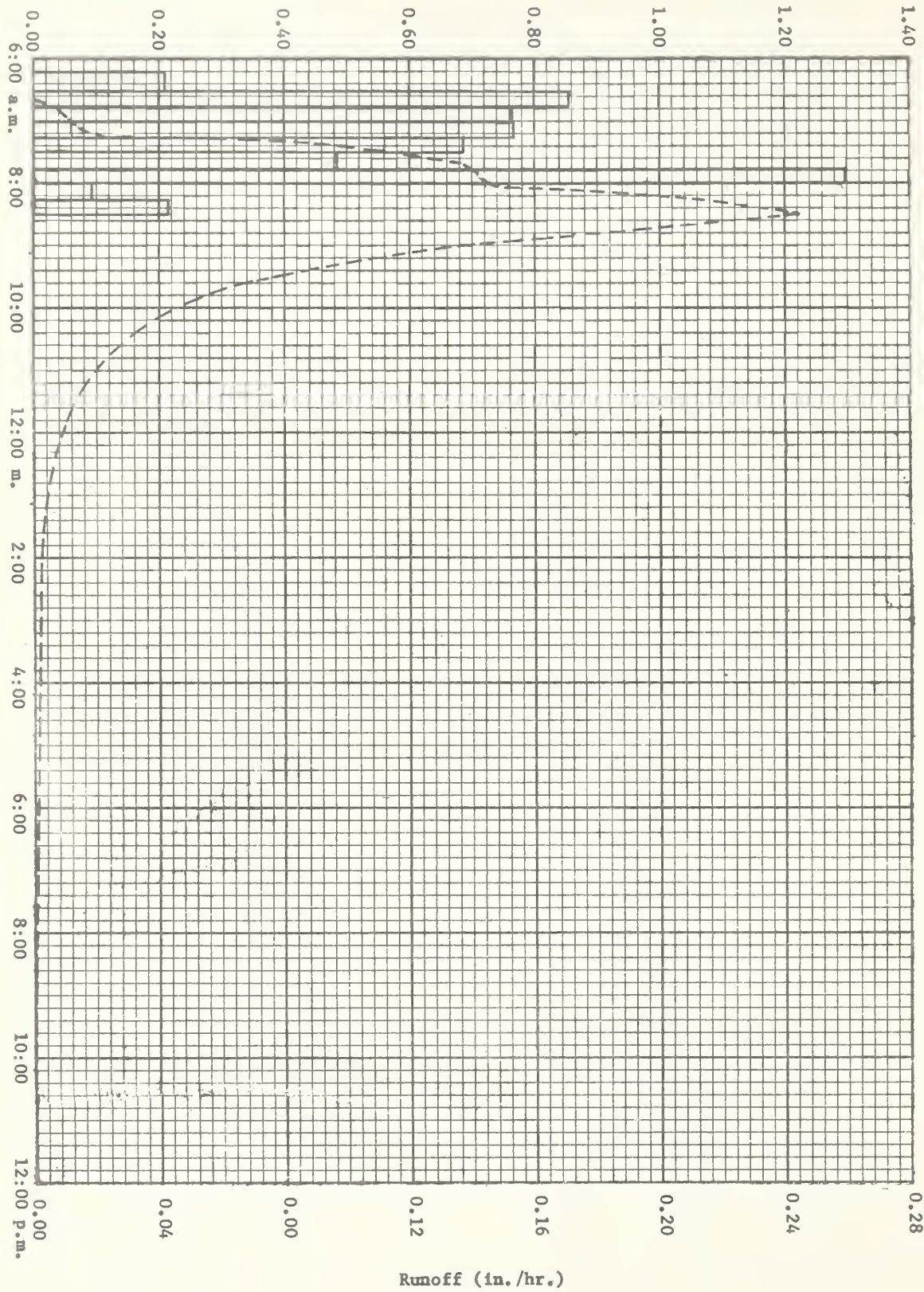




| Oxford, Mississippi                                                                                                                                                                     |                   |                 | Watershed W-4 (62.1)   |                   |               | Area - 2,000 acres |              |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|------------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                   |                   |                 | Rainfall <sup>1/</sup> |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                    | Rainfall (inches) | Runoff (inches) | Date and time          | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| <u>Event of May 22, 1957</u>                                                                                                                                                            |                   |                 |                        |                   |               |                    |              |               |
| 4-22-57                                                                                                                                                                                 | 1.5335            | 0.1787          | Rain Gages R-7 & R-8   |                   |               | 5-22-57            |              |               |
| 4-23                                                                                                                                                                                    | 0                 | 0.0095          | 5-22-57                |                   |               | 6:40 a             | 0            | 0             |
| 4-24                                                                                                                                                                                    | 0                 | 0.0012          | 6:10 a                 | 0                 | 0             | :45                | 0.0064       | 0.0003        |
| 4-25                                                                                                                                                                                    | 0.2933            | 0.0155          | :30                    | 0.2106            | 0.0762        | 7:10               | 0.0179       | 0.0052        |
| 4-26                                                                                                                                                                                    | 0                 | 0.0036          | :45                    | 0.8582            | 0.2672        | :20                | 0.0883       | 0.0147        |
| 4-27 to 29                                                                                                                                                                              | 0                 | 0               | 7:00                   | 0.7668            | 0.4589        | :30                | 0.1155       | 0.0316        |
| 4-29                                                                                                                                                                                    | 0.4323            | 0.0036          | :15                    | 0.7680            | 0.6509        | :45                | 0.1393       | 0.0573        |
| 4-30                                                                                                                                                                                    | 0                 | 0               | :30                    | 0.6880            | 0.8229        | 8:00               | 0.1453       | 0.0929        |
| 5-1-57                                                                                                                                                                                  | 0.2256            | 0.0012          | :45                    | 0.4876            | 0.9448        | :15                | 0.2108       | 0.1355        |
| 5-2                                                                                                                                                                                     | 0.2178            | 0               | 8:00                   | 1.2988            | 1.2695        | :30                | 0.2445       | 0.1925        |
| 5-3 to 13                                                                                                                                                                               | 0                 | 0               | :15                    | 0.0940            | 1.2930        | :45                | 0.1949       | 0.2475        |
| 5-13                                                                                                                                                                                    | 0.2594            | 0               | :30                    | 0.2164            | 1.3471        | 9:00               | 0.1354       | 0.2888        |
| 5-14                                                                                                                                                                                    | 0.0541            | 0               |                        |                   |               | :30                | 0.0764       | 0.3405        |
| 5-15                                                                                                                                                                                    | 0                 | 0               |                        |                   |               | 10:00              | 0.0461       | 0.3697        |
| 5-16                                                                                                                                                                                    | 0.9882            | 0.0607          |                        |                   |               | 11:00              | 0.0193       | 0.4015        |
| 5-17                                                                                                                                                                                    | 0                 | 0.0012          |                        |                   |               | 12:15 p            | 0.0074       | 0.4164        |
| 5-18                                                                                                                                                                                    | 1.4296            | 0.0631          |                        |                   |               | 2:00               | 0.0022       | 0.4242        |
| 5-19                                                                                                                                                                                    | 0.1449            | 0.0774          |                        |                   |               | 6:00               | 0.0003       | 0.4263        |
| 5-20 to 22                                                                                                                                                                              | 0                 | 0               |                        |                   |               | 12:00              | 0            | 0.4264        |
| <u>Watershed conditions:</u> 21% of the area was under cultivation in cotton and corn and 2% in hay. 33% was idle; 11% in pasture; 31% wooded, and the remaining 2% active raw gullies. |                   |                 |                        |                   |               |                    |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 2017.<br><sup>1/</sup> Thiessen Weighted                                                                                          |                   |                 |                        |                   |               |                    |              |               |

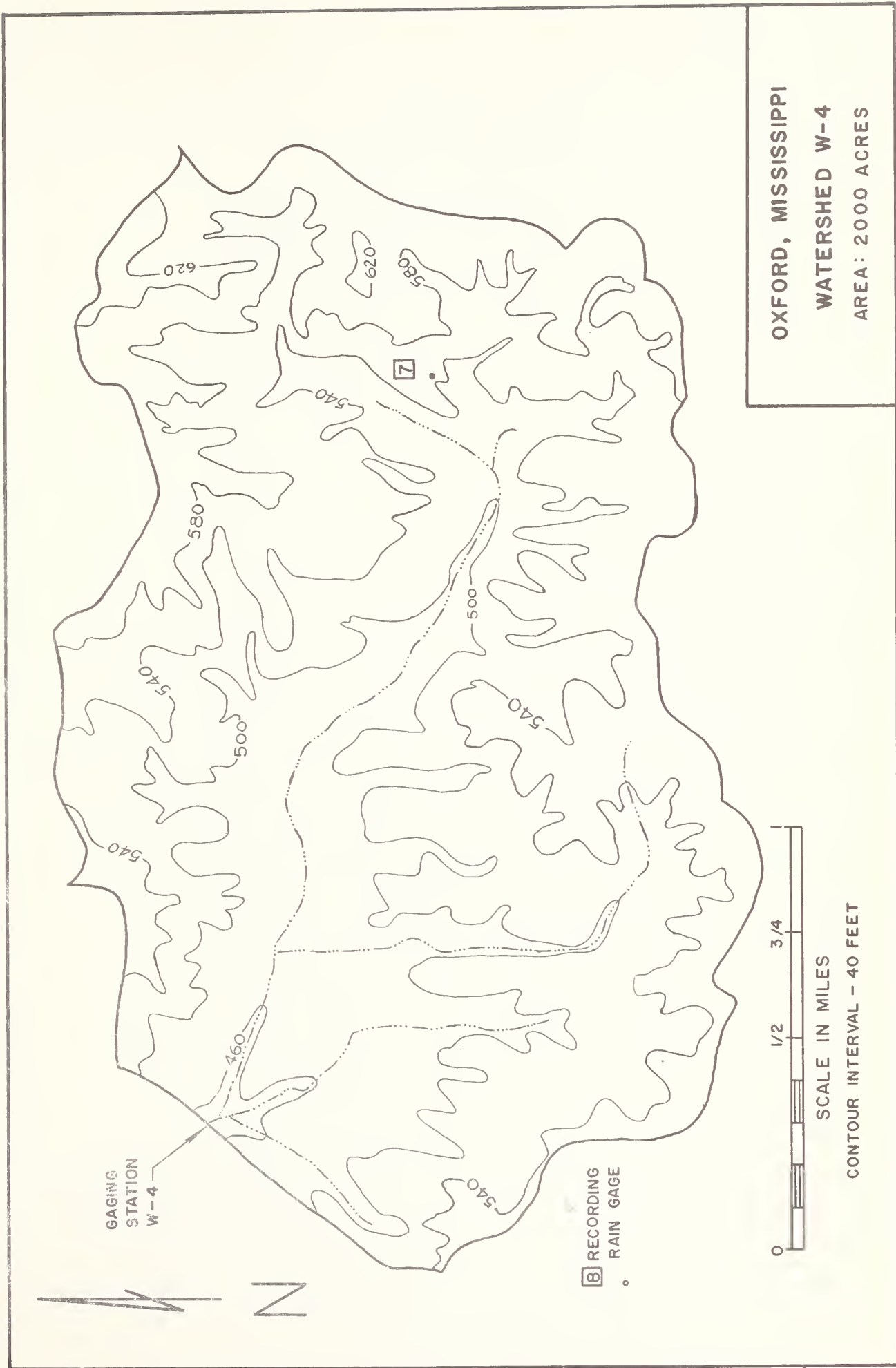


Precipitation (in./hr.)



May 22, 1957

Oxford, Mississippi Watershed W-4



OXFORD, MISSISSIPPI  
WATERSHED W-4  
AREA: 2000 ACRES

0 1/2 3/4  
SCALE IN MILES  
CONTOUR INTERVAL - 40 FEET

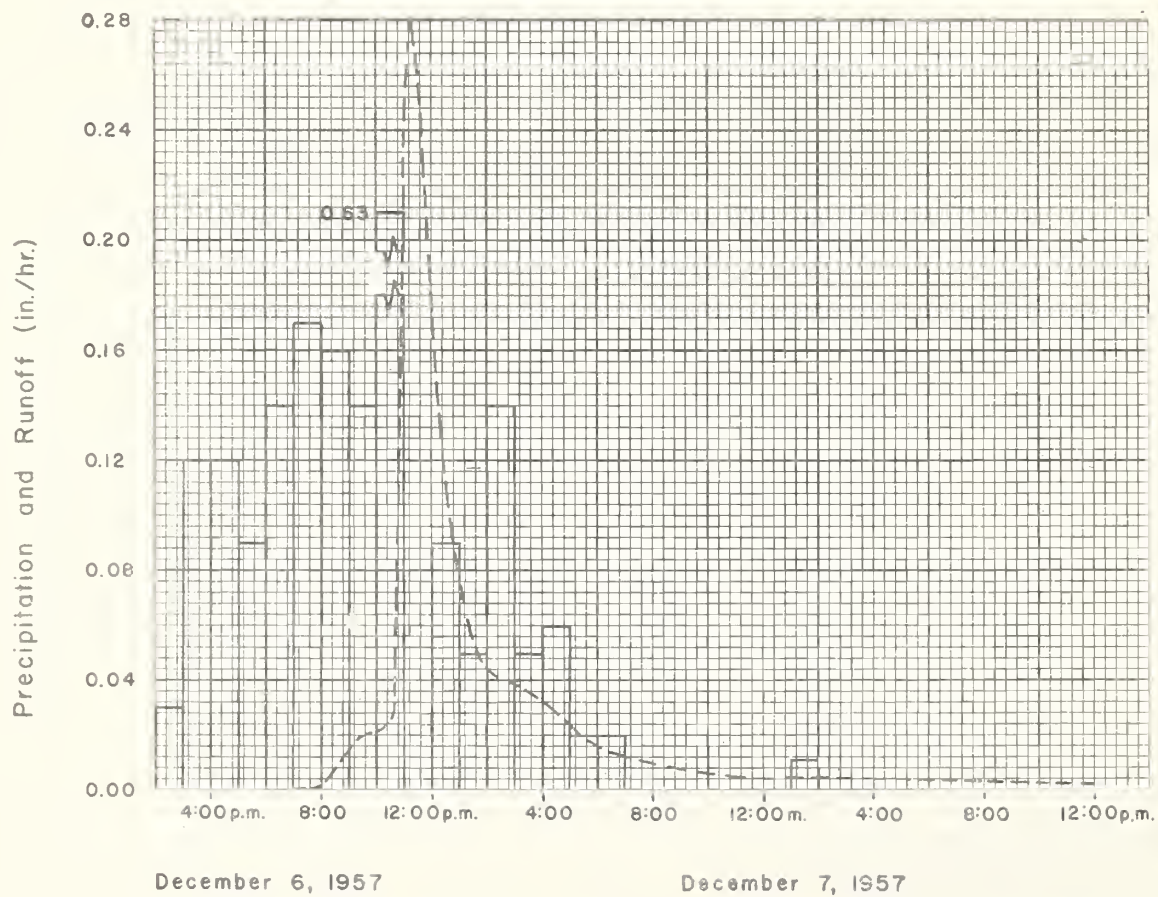
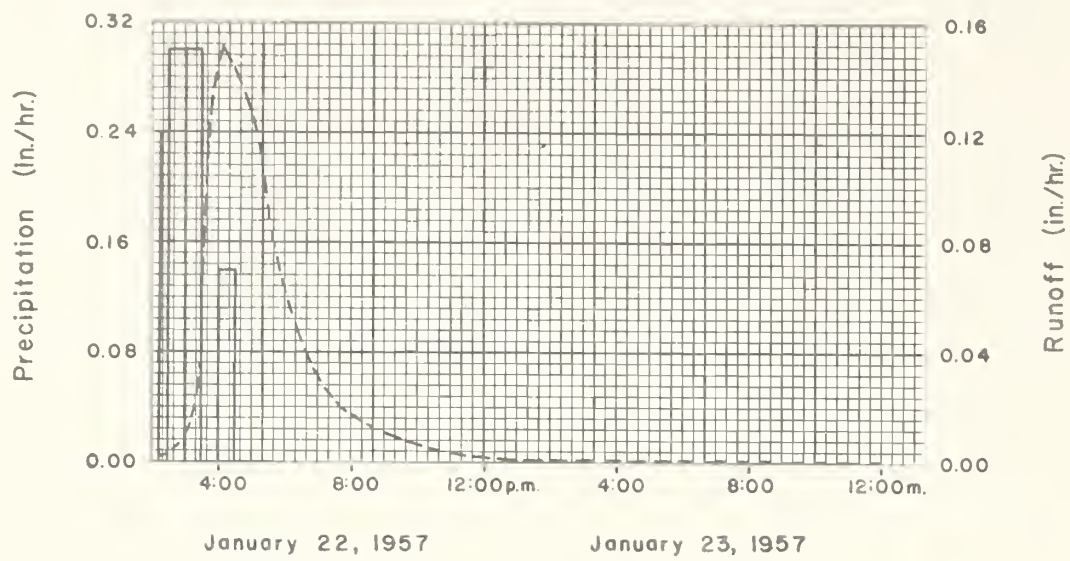
GAGING  
STATION  
W-4

7  
RECORDING  
RAIN GAGE



| Oxford, Mississippi                                                                                                                                                             |                   |                 | Watershed W-5 (62.2) |                   |               | Area - 1,130 acres |              |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                           |                   |                 | Rainfall             |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                            | Rainfall (inches) | Runoff (inches) | Date and time        | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| <u>Event of January 22, 1957</u>                                                                                                                                                |                   |                 |                      |                   |               |                    |              |               |
| 12-23-56                                                                                                                                                                        | 0                 | 0.0253          | Rain Gage No. R-8    |                   |               | 1-22-57            |              |               |
| 12-24                                                                                                                                                                           | 0                 | 0.0021          | 1-22-57              |                   |               | 2:15 p             | 0.0020       | 0             |
| 12-25                                                                                                                                                                           | 0                 | 0.0021          | 2:15 p               | 0                 | 0             | :45                | 0.0046       | 0.0015        |
| 12-26                                                                                                                                                                           | 0                 | 0.0021          | :30                  | 0.24              | 0.06          | 3:15               | 0.0167       | 0.0066        |
| 12-27                                                                                                                                                                           | 0                 | 0.0021          | 3:00                 | 0.30              | 0.27          | :30                | 0.0439       | 0.0142        |
| 12-28 to 1-4-57                                                                                                                                                                 | 0                 | 0               | :30                  | 0.30              | 0.42          | :45                | 0.1176       | 0.0344        |
| 1-4                                                                                                                                                                             | 1.63              | 0.4001          | 4:00                 | 0.12              | 0.48          | 4:00               | 0.1457       | 0.0673        |
| 1-5                                                                                                                                                                             | 0                 | 0.0063          | :30                  | 0.14              | 0.56          | :10                | 0.1509       | 0.0921        |
| 1-6                                                                                                                                                                             | 0.02              | 0.0021          |                      |                   |               | 5:00               | 0.1281       | 0.2085        |
| 1-8 to 14                                                                                                                                                                       | 0                 | 0.0021          |                      |                   |               | :30                | 0.0930       | 0.2647        |
| 1-14 to 20                                                                                                                                                                      | 0                 | 0               |                      |                   |               | 6:30               | 0.0456       | 0.3319        |
| 1-21                                                                                                                                                                            | 0.40              | 0.0021          |                      |                   |               | 8:00               | 0.0167       | 0.3752        |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 9:30               | 0.0088       | 0.3948        |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 11:30 p            | 0.0029       | 0.4055        |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 1-23-57            |              |               |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 2:00 a             | 0.0005       | 0.4084        |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 6:00               | 0.0002       | 0.4093        |
|                                                                                                                                                                                 |                   |                 |                      |                   |               | 12:00              | 0            | 0.4097        |
| <u>Event of December 6, 1957</u>                                                                                                                                                |                   |                 |                      |                   |               |                    |              |               |
| 11-6-57                                                                                                                                                                         | 0                 | 0.0021          | Rain Gage No. R-8    |                   |               | 12-6-57            |              |               |
| 11-7                                                                                                                                                                            | 1.52              | 0.1790          | 12-6-57              |                   |               | 7:00 p             | 0.0003       | 0.0000        |
| 11-8                                                                                                                                                                            | 0.44              | 0.2527          | 2:00 p               | 0                 | 0             | :40                | 0.0004       | 0.0002        |
| 11-9                                                                                                                                                                            | 0                 | 0.0042          | 3:00                 | 0.03              | 0.03          | 9:30               | 0.0202       | 0.0206        |
| 11-10 to 12                                                                                                                                                                     | 0                 | 0.0021          | 4:00                 | 0.12              | 0.15          | 10:20              | 0.0237       | 0.0383        |
| 11-12                                                                                                                                                                           | 0.41              | 0.0021          | 5:00                 | 0.12              | 0.27          | :45                | 0.1053       | 0.0611        |
| 11-13                                                                                                                                                                           | 2.62              | 1.6637          | 6:00                 | 0.09              | 0.36          | 11:00              | 0.2457       | 0.1050        |
| 11-14                                                                                                                                                                           | 0.35              | 0.7371          | 7:00                 | 0.14              | 0.50          | :15                | 0.2808       | 0.1583        |
| 11-15                                                                                                                                                                           | 0.13              | 0.0632          | 8:00                 | 0.17              | 0.67          | :30                | 0.2633       | 0.2263        |
| 11-16                                                                                                                                                                           | 0.11              | 0.0253          | 9:00                 | 0.16              | 0.83          | 12:00 p            | 0.1720       | 0.3352        |
| 11-17                                                                                                                                                                           | 0.51              | 0.0548          | 10:00                | 0.14              | 0.97          | 12-7-57            |              |               |
| 11-18                                                                                                                                                                           | 1.16              | 0.9688          | 11:00                | 0.63              | 1.60          | 1:00 a             | 0.0772       | 0.4536        |
| 11-19                                                                                                                                                                           | 0                 | 0.0274          | 12:00 p              | 0.08              | 1.68          | 2:00               | 0.0439       | 0.5138        |
| 11-20                                                                                                                                                                           | 0                 | 0.0063          | 12-7-57              |                   |               | 4:30               | 0.0298       | 0.6044        |
| 11-21                                                                                                                                                                           | 0                 | 0.0042          | 1:00 a               | 0.09              | 1.77          | 7:15               | 0.0149       | 0.6688        |
| 11-22                                                                                                                                                                           | 0.50              | 0.0274          | 2:00                 | 0.05              | 1.82          | 11:00 a            | 0.0057       | 0.7037        |
| 11-23                                                                                                                                                                           | 0.02              | 0.0232          | 3:00                 | 0.14              | 1.96          | 2:00 p             | 0.0042       | 0.7173        |
| 11-24                                                                                                                                                                           | 0.71              | 0.0821          | 4:00                 | 0.05              | 2.01          | 6:00               | 0.0040       | 0.7382        |
| 11-25                                                                                                                                                                           | 0.15              | 0.0990          | 5:00                 | 0.06              | 2.07          | 12:00 p            | 0.0021       | 0.7543        |
| 11-26                                                                                                                                                                           | 0                 | 0.0084          | 6:00                 | 0.02              | 2.09          |                    |              |               |
| 11-27                                                                                                                                                                           | 0                 | 0.0021          | 7:00                 | 0.02              | 2.11          |                    |              |               |
| 11-28                                                                                                                                                                           | 0.58              | 0.0505          | 7:00-1:00 p          | 0                 | 2.11          |                    |              |               |
| 11-29                                                                                                                                                                           | 0                 | 0.0084          | 1:00                 | 0                 | 2.11          |                    |              |               |
| 11-30 to 12-5                                                                                                                                                                   | 0                 | 0.0021          | 2:00                 | 0.11              | 2.22          |                    |              |               |
| Watershed conditions: 24% of the area was under cultivation in cotton and corn and 4% in hay. 23% was idle; 30% in pasture; 17% wooded and the remaining 2% active raw gullies. |                   |                 |                      |                   |               |                    |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 1139.                                                                                                                     |                   |                 |                      |                   |               |                    |              |               |





OXFORD, MISSISSIPPI WATERSHED W-5

GAGING STATION  
W-5

N

RECORDING RAIN GAGE

8



SCALE IN MILES

CONTOUR INTERVAL 40 FEET

OXFORD, MISSISSIPPI

WATERSHED W-5

AREA: 1130 ACRES



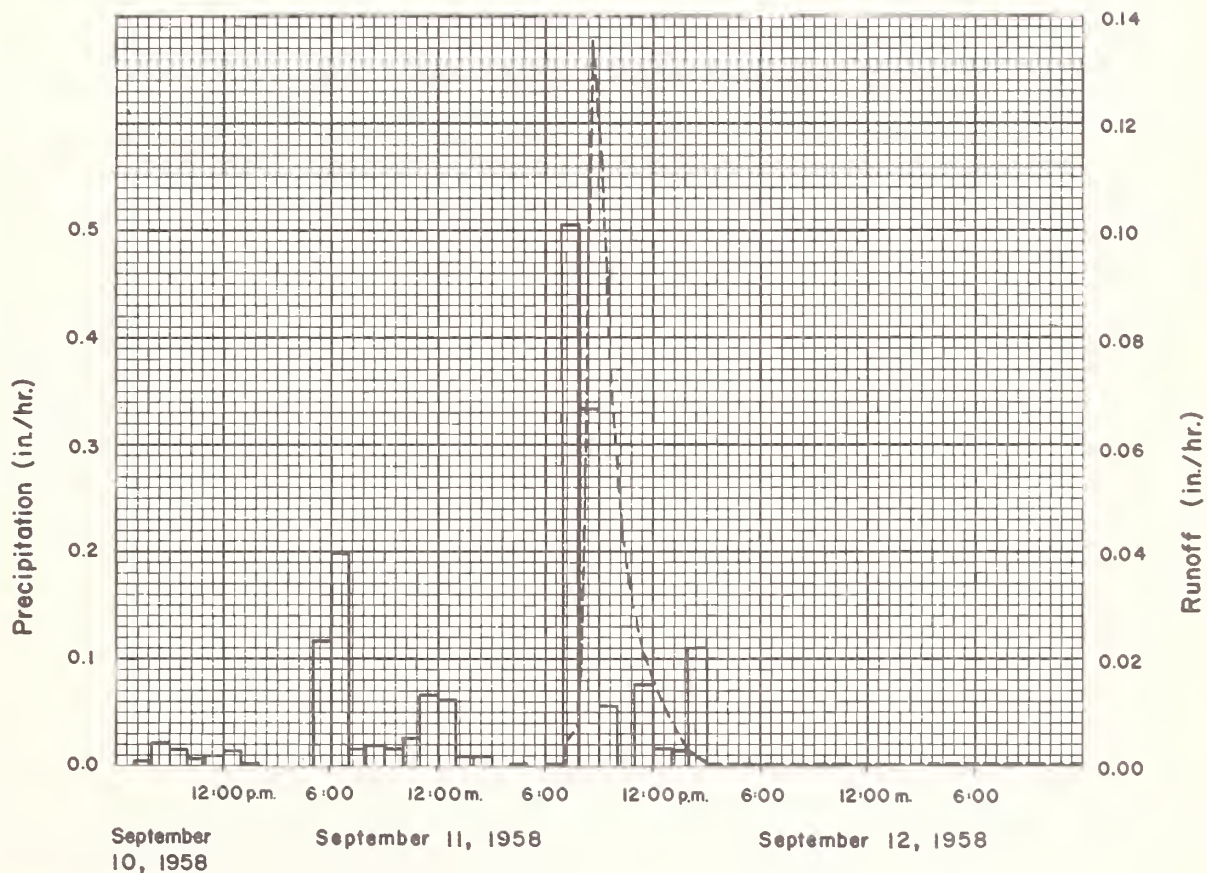
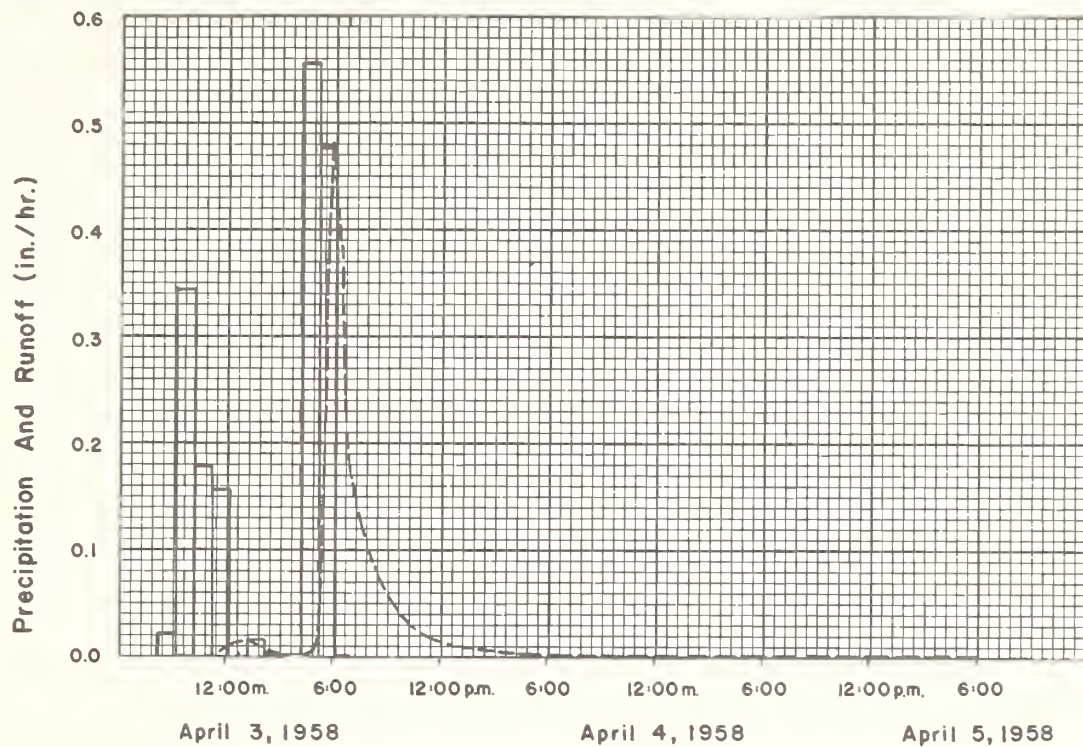
| Oxford, Mississippi                                                                                                                                                                                                  |                   |                 | Watershed W-10 (62.3)          |                   |               | Area - 5,530 acres |              |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                |                   |                 | Rainfall <sup>1/</sup>         |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                                                 | Rainfall (inches) | Runoff (inches) | Date and time                  | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| <u>Event of April 3, 1958</u>                                                                                                                                                                                        |                   |                 |                                |                   |               |                    |              |               |
| 4-3-58                                                                                                                                                                                                               | 0                 | 0.0004          | Rain Gages R-3, 9, 10, 13 & 14 |                   |               | 4-3-58             |              |               |
| 4-4 to 6                                                                                                                                                                                                             | 0                 | 0               | 4-3-58                         |                   |               | 9:00 a             | 0.0002       | 0.0000        |
| 4-6                                                                                                                                                                                                                  | 0.0156            | 0.0004          | 8:00 a                         | 0                 | 0.0000        | 11:00              | 0.0014       | 0.0011        |
| 4-7                                                                                                                                                                                                                  | 0.2410            | 0.1205          | 9:00                           | 0.0254            | 0.0254        | 12:45 p            | 0.0160       | 0.0200        |
| 4-8                                                                                                                                                                                                                  | 0.4303            | 0.0947          | 10:00                          | 0.3460            | 0.3714        | 2:30               | 0.0074       | 0.0427        |
| 4-9                                                                                                                                                                                                                  | 0                 | 0.0473          | 11:00                          | 0.1815            | 0.5529        | 4:45               | 0.0074       | 0.0524        |
| 4-10                                                                                                                                                                                                                 | 0                 | 0.0043          | 12:00 m                        | 0.1585            | 0.7114        | 5:15               | 0.1829       | 0.0939        |
| 4-11                                                                                                                                                                                                                 | 0                 | 0.0022          | 1:00                           | 0                 | 0.7174        | :30                | 0.3381       | 0.1590        |
| 4-12                                                                                                                                                                                                                 | 0.0897            | 0.0026          | 2:00                           | 0.0199            | 0.7373        | :45                | 0.4645       | 0.2593        |
| 4-13                                                                                                                                                                                                                 | 0.0567            | 0.0030          | 3:00                           | 0.0059            | 0.7432        | :50                | 0.4824       | 0.2988        |
| 4-14                                                                                                                                                                                                                 | 0                 | 0.0017          | 4:00                           | 0.0002            | 0.7434        | 6:15               | 0.3721       | 0.4843        |
| 4-15                                                                                                                                                                                                                 | 0                 | 0.0013          | 5:00                           | 0.5560            | 1.2994        | :30                | 0.2807       | 0.5659        |
| 4-16                                                                                                                                                                                                                 | 0                 | 0.0009          | 6:00                           | 0.4775            | 1.7769        | 7:00               | 0.1794       | 0.6781        |
| 4-17                                                                                                                                                                                                                 | 0.5897            | 0.0293          | 7:00                           | 0.0059            | 1.7828        | 10:00 p            | 0.0344       | 0.9308        |
| 4-18                                                                                                                                                                                                                 | 0                 | 0.0009          |                                |                   |               | 4-4-58             |              |               |
| 4-19                                                                                                                                                                                                                 | 0                 | 0.0004          |                                |                   |               | 12:30 a            | 0.0138       | 0.9837        |
| 4-20 to 22                                                                                                                                                                                                           | 0                 | 0               |                                |                   |               | 4:00               | 0.0063       | 1.0164        |
| 4-22                                                                                                                                                                                                                 | 0.0140            | 0               |                                |                   |               | 10:00              | 0.0031       | 1.0436        |
| 4-23                                                                                                                                                                                                                 | 0.8670            | 0.0689          |                                |                   |               | 8:00 p             | 0.0010       | 1.0629        |
| 4-24                                                                                                                                                                                                                 | 0.0460            | 0.0775          |                                |                   |               | 4-5-58             |              |               |
| 4-25                                                                                                                                                                                                                 | 0.1974            | 0.0202          |                                |                   |               | 6:00 a             | 0.0008       | 1.0720        |
| 4-26                                                                                                                                                                                                                 | 0.4245            | 0.1894          |                                |                   |               |                    |              |               |
| 4-27                                                                                                                                                                                                                 | 0                 | 0.0052          |                                |                   |               |                    |              |               |
| 4-28                                                                                                                                                                                                                 | 0                 | 0.0034          |                                |                   |               |                    |              |               |
| 4-29                                                                                                                                                                                                                 | 0.0774            | 0.0034          |                                |                   |               |                    |              |               |
| 4-30                                                                                                                                                                                                                 | 0.0757            | 0.0030          |                                |                   |               |                    |              |               |
| 4-31                                                                                                                                                                                                                 | 0                 | 0.0034          |                                |                   |               |                    |              |               |
| 5-1-58                                                                                                                                                                                                               | 0                 | 0.0039          |                                |                   |               |                    |              |               |
| 5-2                                                                                                                                                                                                                  | 0.0259            | 0.0039          |                                |                   |               |                    |              |               |
| <u>Watershed conditions:</u> 20% of the area was under cultivation, in corn and cotton, hay comprising $\frac{1}{2}$ %. 53% was idle; 10% in pasture; 15% wooded; and remaining $1\frac{1}{2}$ % active raw gullies. |                   |                 |                                |                   |               |                    |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 5576.<br><sup>1/</sup> Thiessen Weighted                                                                                                                       |                   |                 |                                |                   |               |                    |              |               |



| Oxford, Mississippi                                                                                                                                                                                                   |                   |                 | Watershed W-10 (62.3)          |                   |               | Area - 5,530 acres |              |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|-------------------|---------------|--------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                 |                   |                 | Rainfall <sup>1/</sup>         |                   |               | Runoff             |              |               |
| Date                                                                                                                                                                                                                  | Rainfall (inches) | Runoff (inches) | Date and time                  | Intensity (in/hr) | Acc. (inches) | Date and time      | Rate (in/hr) | Acc. (inches) |
| Event of September 10, 1958                                                                                                                                                                                           |                   |                 |                                |                   |               |                    |              |               |
| 8-10-58                                                                                                                                                                                                               | 0.0564            | 0               | Rain Gages R-3, 9, 10, 13 & 14 |                   |               | 9-11-58            |              |               |
| 8-11                                                                                                                                                                                                                  | 0.0048            | 0               | 9-10-58                        |                   |               | 6:45 p             | <0.0001      | 0.0000        |
| 8-12 to 14                                                                                                                                                                                                            | 0                 | 0               | 8:00 p                         | 0.0068            | 0.0068        | 7:00               | 0.0003       | 0.0000        |
| 8-14                                                                                                                                                                                                                  | 0.0022            | 0               | 9:00                           | 0.0225            | 0.0293        | :05                | 0.0047       | 0.0002        |
| 8-15 to 17                                                                                                                                                                                                            | 0                 | 0               | 10:00                          | 0.0184            | 0.0477        | :45                | 0.0074       | 0.0041        |
| 8-17                                                                                                                                                                                                                  | 0.2637            | 0               | 11:00                          | 0.0089            | 0.0566        | :50                | 0.0090       | 0.0047        |
| 8-18 to 22                                                                                                                                                                                                            | 0                 | 0               | 12:00 p                        | 0.0104            | 0.0670        | 8:00               | 0.0187       | 0.0070        |
| 8-22                                                                                                                                                                                                                  | 0.0442            | 0               | 9-11-58                        |                   |               | :15                | 0.0430       | 0.0147        |
| 8-23                                                                                                                                                                                                                  | 0.2070            | 0               | 1:00 a                         | 0.0154            | 0.0824        | :30                | 0.1031       | 0.0330        |
| 8-24                                                                                                                                                                                                                  | 0.0674            | 0               | 2:00                           | 0.0018            | 0.0842        | :45                | 0.1354       | 0.0628        |
| 8-25                                                                                                                                                                                                                  | 0.0022            | 0               | 2:00-5:00                      | 0                 | 0.0842        | 9:15               | 0.1103       | 0.1245        |
| 8-26 to 9-1                                                                                                                                                                                                           | 0                 | 0               | 6:00                           | 0.1192            | 0.2034        | :45                | 0.0753       | 0.1707        |
| 9-1                                                                                                                                                                                                                   | 0.3824            | 0               | 7:00                           | 0.1995            | 0.4029        | 10:15              | 0.0475       | 0.2013        |
| 9-2                                                                                                                                                                                                                   | 0.7295            | 0.0275          | 8:00                           | 0.0173            | 0.4202        | 11:00              | 0.0296       | 0.2313        |
| 9-3                                                                                                                                                                                                                   | 0                 | 0.0009          | 9:00                           | 0.0204            | 0.4406        | 12:00 p            | 0.0165       | 0.2544        |
| <u>Watershed conditions:</u> 20% of the area was under cultivation, in corn and cotton, hay comprising $\frac{1}{2}$ %. 53% was idle; 10% in pasture; 15% wooded; and; remaining $1\frac{1}{2}$ % active raw gullies. |                   |                 | 10:00                          | 0.0186            | 0.4592        | 9-12-58            |              |               |
|                                                                                                                                                                                                                       |                   |                 | 11:00                          | 0.0288            | 0.4880        | 1:00 a             | 0.0084       | 0.2667        |
|                                                                                                                                                                                                                       |                   |                 | 12:00 m                        | 0.0683            | 0.5563        | 2:00               | 0.0032       | 0.2724        |
|                                                                                                                                                                                                                       |                   |                 | 1:00                           | 0.0647            | 0.6210        | 3:00               | 0.0009       | 0.2740        |
|                                                                                                                                                                                                                       |                   |                 | 2:00                           | 0.0088            | 0.6298        | 5:00               | 0.0002       | 0.2748        |
|                                                                                                                                                                                                                       |                   |                 | 3:00                           | 0.0098            | 0.6396        | 4:00 p             | 0.0001       | 0.2769        |
|                                                                                                                                                                                                                       |                   |                 | 4:00                           | 0.0016            | 0.6412        | 12:00 p            | 0.0001       | 0.2777        |
|                                                                                                                                                                                                                       |                   |                 | 5:00                           | 0.0030            | 0.6442        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 6:00                           | 0                 | 0.6442        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 7:00                           | 0.0312            | 0.6754        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 8:00                           | 0.5071            | 1.1825        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 9:00                           | 0.3241            | 1.5066        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 10:00                          | 0.0588            | 1.5654        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 11:00                          | 0.0493            | 1.6147        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 12:00 p                        | 0.0791            | 1.6938        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 9-12-58                        |                   |               |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 1:00                           | 0.0188            | 1.7126        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 2:00                           | 0.0167            | 1.7293        |                    |              |               |
|                                                                                                                                                                                                                       |                   |                 | 3:00                           | 0.1136            | 1.8429        |                    |              |               |

Notes: To convert runoff in in/hr to cfs, multiply by 5576.

<sup>1/</sup> Thiessen Weighted



OXFORD, MISSISSIPPI WATERSHED W-10

14

N

GAGING STATION W-10

RECORDING RAIN GAGE

15

3.0 MILES TO RAIN GAGE NO. 9

4.0 MILES TO RAIN GAGE NO. 3



SCALE IN MILES

CONTOUR INTERVAL - 40 FEET

10

OXFORD, MISSISSIPPI

WATERSHED W-10

AREA: 5530 ACRES

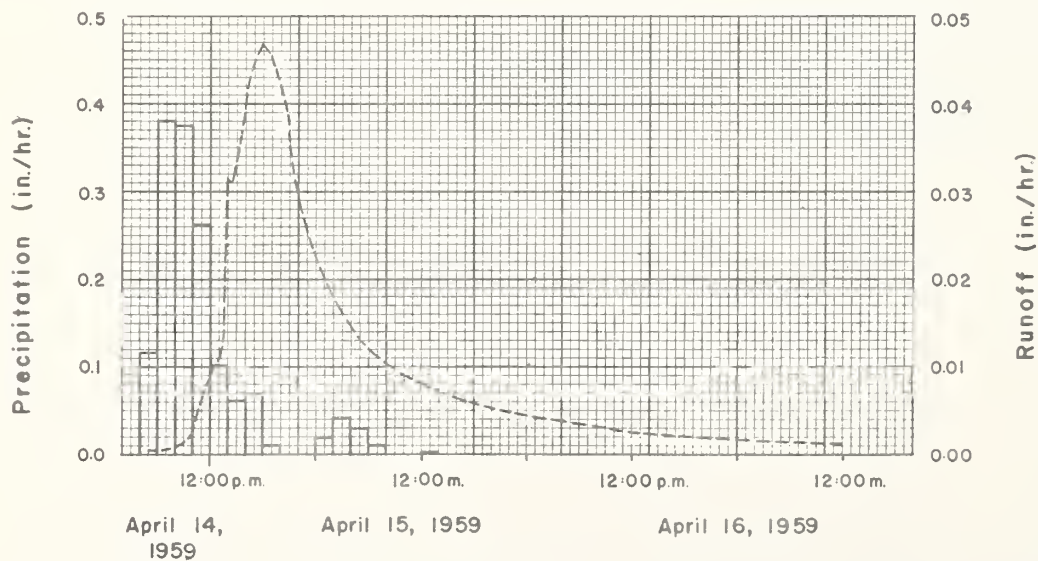
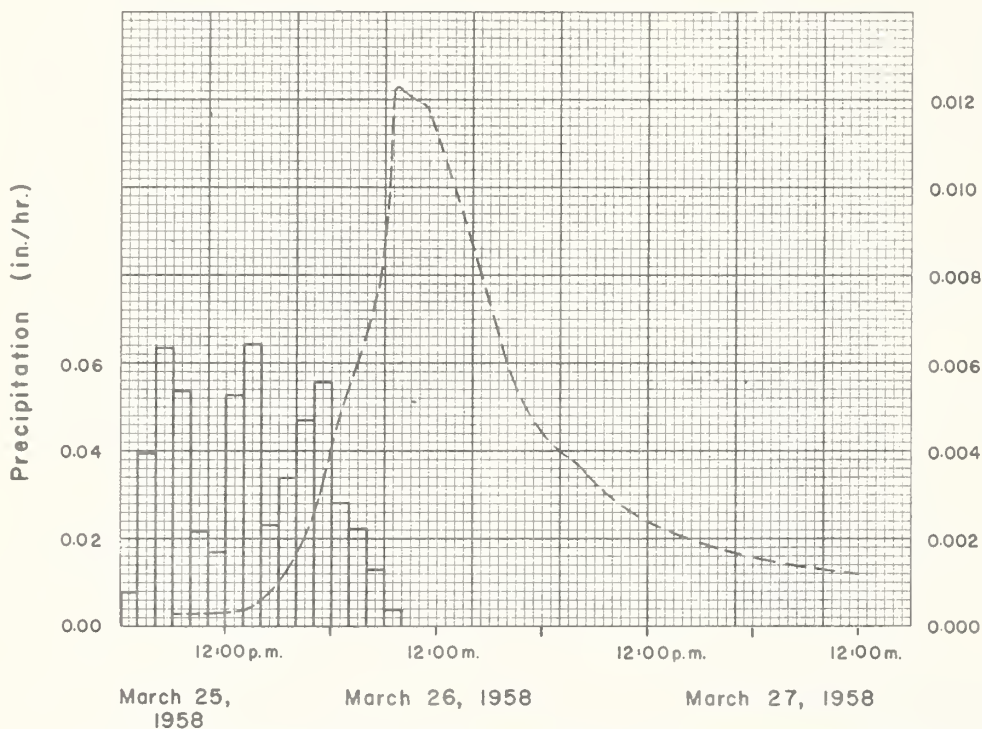
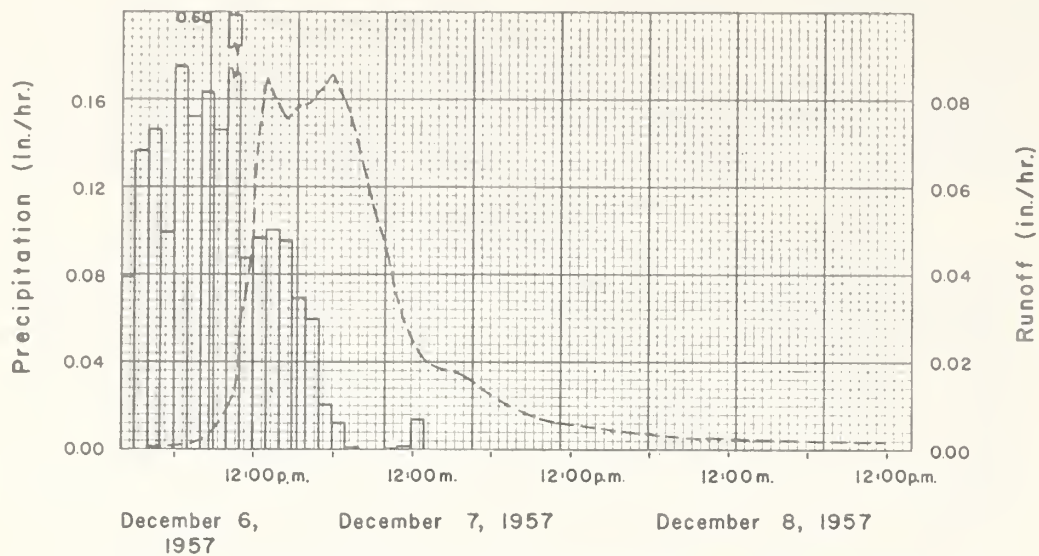


| Oxford, Mississippi                                                                                                                                                                                                              |                   |                 | Watershed W-34 (62.11)   |                   |               | Area - 75,000 acres |              |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------------------|-------------------|---------------|---------------------|--------------|---------------|
| Antecedent conditions                                                                                                                                                                                                            |                   |                 | Rainfall <sup>1/</sup>   |                   |               | Runoff              |              |               |
| Date                                                                                                                                                                                                                             | Rainfall (inches) | Runoff (inches) | Date and time            | Intensity (in/hr) | Acc. (inches) | Date and time       | Rate (in/hr) | Acc. (inches) |
| Event of December 6, 1957                                                                                                                                                                                                        |                   |                 |                          |                   |               |                     |              |               |
| 11-6-57                                                                                                                                                                                                                          | 0                 | 0.0001          | Rain Gages R-1 thru R-15 |                   |               | 12-6-57             |              |               |
| 11-7                                                                                                                                                                                                                             | 1.4959            | 0.0235          |                          |                   |               | 4:00 p              | 0.0007       | 0.0000        |
| 11-8                                                                                                                                                                                                                             | 0.4280            | 0.0964          | 12-6-57                  |                   |               | 7:00                | 0.0012       | 0.0028        |
| 11-9                                                                                                                                                                                                                             | 0                 | 0.0002          | 2:00 p                   | 0                 | 0             | 9:00                | 0.0049       | 0.0088        |
| 11-10 to 12                                                                                                                                                                                                                      | 0                 | 0               | 3:00                     | 0.0786            | 0.0786        | 10:30               | 0.0122       | 0.0205        |
| 11-12                                                                                                                                                                                                                            | 0.4126            | 0               | 4:00                     | 0.1362            | 0.2148        | 11:30 p             | 0.0390       | 0.0467        |
| 11-13                                                                                                                                                                                                                            | 2.2913            | 0.2636          | 5:00                     | 0.1458            | 0.3606        | 12-7-57             |              |               |
| 11-14                                                                                                                                                                                                                            | 0.3356            | 0.1218          | 6:00                     | 0.0989            | 0.4595        | 12:30 a             | 0.0767       | 0.1039        |
| 11-15                                                                                                                                                                                                                            | 0.2751            | 0.0048          | 7:00                     | 0.1741            | 0.6336        | 1:00                | 0.0849       | 0.1445        |
| 11-16                                                                                                                                                                                                                            | 0.0581            | 0.0102          | 8:00                     | 0.1525            | 0.7861        | :30                 | 0.0806       | 0.1855        |
| 11-17                                                                                                                                                                                                                            | 0.8926            | 0.0650          | 9:00                     | 0.1624            | 0.9485        | 2:30                | 0.0751       | 0.2633        |
| 11-18                                                                                                                                                                                                                            | 1.2244            | 0.2395          | 10:00                    | 0.1455            | 1.0940        | 3:30                | 0.0783       | 0.3401        |
| 11-19                                                                                                                                                                                                                            | 0                 | 0.0098          | 11:00                    | 0.6075            | 1.7015        | 4:00                | 0.0783       | 0.3793        |
| 11-20                                                                                                                                                                                                                            | 0                 | 0.0016          | 12:00 p                  | 0.0876            | 1.7891        | 5:30                | 0.0828       | 0.5003        |
| 11-21                                                                                                                                                                                                                            | 0                 | 0.0010          | 12-7-57                  |                   |               | 6:00                | 0.0859       | 0.5425        |
| 11-22                                                                                                                                                                                                                            | 0.5217            | 0.0044          | 1:00 a                   | 0.0971            | 1.8862        | :30                 | 0.0817       | 0.5844        |
| 11-23                                                                                                                                                                                                                            | 0.0368            | 0.0070          | 2:00                     | 0.1088            | 1.9950        | 7:00                | 0.0791       | 0.6246        |
| 11-24                                                                                                                                                                                                                            | 0.6153            | 0.0152          | 3:00                     | 0.0950            | 2.0900        | 10:30               | 0.0406       | 0.8346        |
| 11-25                                                                                                                                                                                                                            | 0.1817            | 0.0647          | 4:00                     | 0.0693            | 2.1593        | 11:30               | 0.0293       | 0.8701        |
| 11-26                                                                                                                                                                                                                            | 0                 | 0.0067          | 5:00                     | 0.0597            | 2.2190        | 12:30 p             | 0.0230       | 0.8960        |
| 11-27                                                                                                                                                                                                                            | 0                 | 0.0015          | 6:00                     | 0.0203            | 2.2393        | 2:00                | 0.0185       | 0.9264        |
| 11-28                                                                                                                                                                                                                            | 0.4537            | 0.0174          | 7:00                     | 0.0125            | 2.2518        | 4:00                | 0.0168       | 0.9616        |
| 11-29                                                                                                                                                                                                                            | 0                 | 0.0032          | 8:00                     | 0.0013            | 2.2531        | 6:00                | 0.0124       | 0.9910        |
| 11-30                                                                                                                                                                                                                            | 0                 | 0.0010          | 9:00                     | 0                 | 2.2531        | 8:00                | 0.0094       | 1.0180        |
| 12-1-57                                                                                                                                                                                                                          | 0                 | 0.0007          | 10:00                    | 0                 | 2.2531        | 12-8-57             |              |               |
| 12-2 to 4                                                                                                                                                                                                                        | 0                 | 0.0004          | 11:00                    | 0.0006            | 2.2537        | 1:00 a              | 0.0054       | 1.0527        |
| 12-4                                                                                                                                                                                                                             | 0                 | 0.0002          | 12:00 m                  | 0.0013            | 2.2550        | 6:00                | 0.0034       | 1.0745        |
| 12-5                                                                                                                                                                                                                             | 0                 | 0.0001          | 1:00 p                   | 0.0140            | 2.2790        | 1:00 p              | 0.0023       | 1.0937        |
|                                                                                                                                                                                                                                  |                   |                 | 2:00                     | 0.0536            | 2.3326        | 12:00 p             | 0.0018       | 1.1162        |
| <u>Watershed conditions:</u> Based on an extrapolated estimate, 27% was under cultivation, principally in cotton, corn and hay; 34% was idle; 14% was in pasture; 22% wooded; 2% active raw gullies, and the remaining 1% urban. |                   |                 |                          |                   |               |                     |              |               |
| Notes: To convert runoff in in/hr to cfs, multiply by 75,643.<br><sup>1/</sup> Thiessen Weighted                                                                                                                                 |                   |                 |                          |                   |               |                     |              |               |



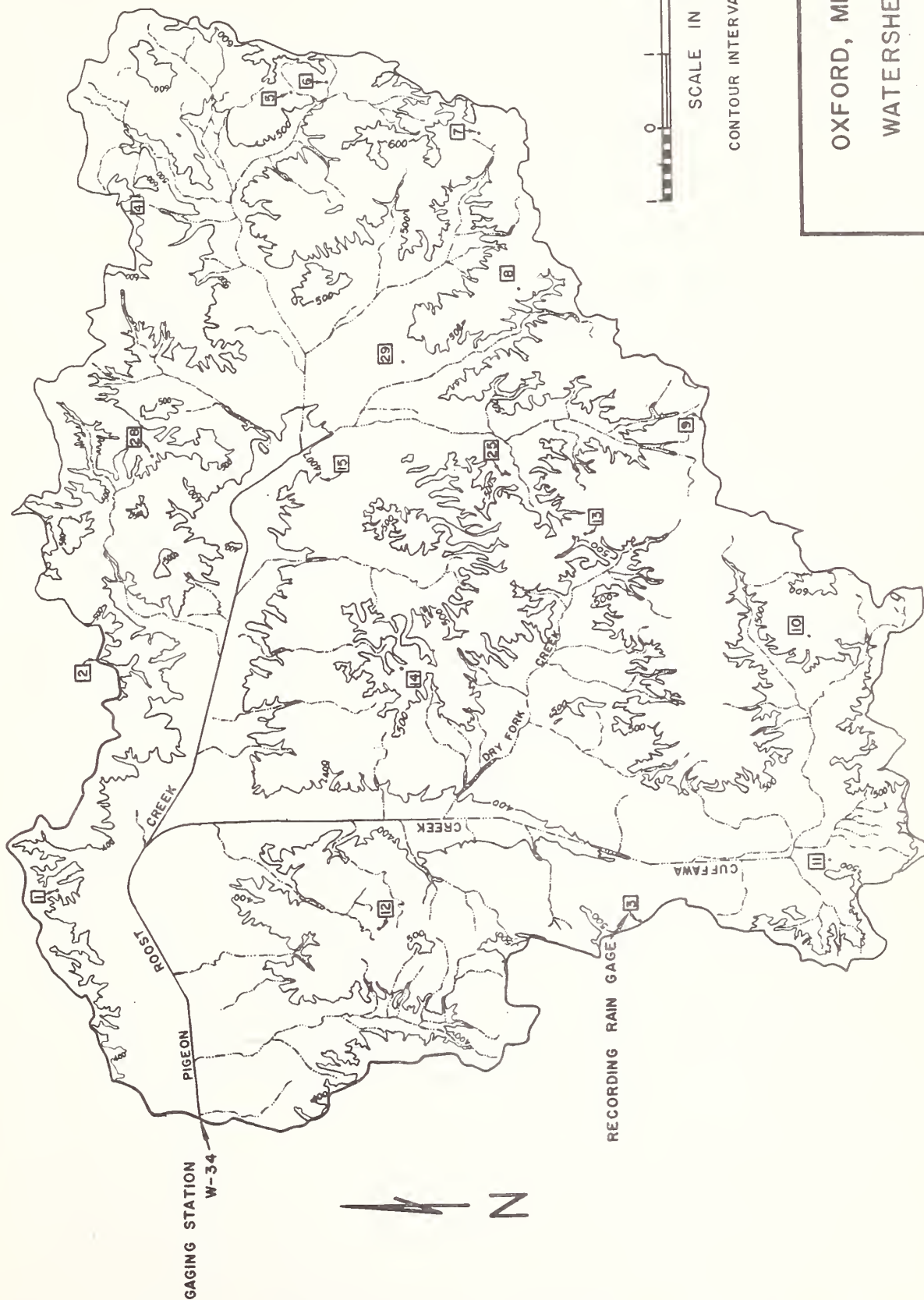
| Oxford, Mississippi                                                                                                                                                                                                              |                      |                    | Watershed W-34 (62.11)   |                      |                  | Area - 75,000 acres |                 |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|--------------------------|----------------------|------------------|---------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                            |                      |                    | Rainfall $\frac{1}{2}$   |                      |                  | Runoff              |                 |                  |
| Date                                                                                                                                                                                                                             | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time         | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time    | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of March 25, 1958</u>                                                                                                                                                                                                   |                      |                    |                          |                      |                  |                     |                 |                  |
| 2-23 to 26-58                                                                                                                                                                                                                    | 0                    | 0.0133             | Rain Gages R-1 thru R-15 |                      |                  | 3-25-58             |                 |                  |
| 2-26                                                                                                                                                                                                                             | 0.9229               | 0.0222             | 3-25-58                  |                      |                  | 9:00 p              | 0.0003          | 0                |
| 2-27                                                                                                                                                                                                                             | 0                    | 0.1574             | 6:00 p                   | 0.                   | 0                | 3-26-58             |                 |                  |
| 2-28                                                                                                                                                                                                                             | 0                    | 0.0155             | 7:00                     | 0.0079               | 0.0079           | 1:00 a              | 0.0004          | 0.0013           |
| 3-1 to 3                                                                                                                                                                                                                         | 0                    | 0.0121             | 8:00                     | 0.0395               | 0.0474           | 4:00                | 0.0016          | 0.0038           |
| 3-3                                                                                                                                                                                                                              | 0                    | 0.0124             | 9:00                     | 0.0636               | 0.1110           | 7:00                | 0.0055          | 0.0140           |
| 3-4 to 6                                                                                                                                                                                                                         | 0                    | 0.0121             | 10:00                    | 0.0539               | 0.1649           | 8:30                | 0.0074          | 0.0237           |
| 3-6                                                                                                                                                                                                                              | 0.0283               | 0.0127             | 11:00                    | 0.0218               | 0.1867           | 9:45                | 0.0123          | 0.0360           |
| 3-7                                                                                                                                                                                                                              | 0.6638               | 0.0673             | 12:00 p                  | 0.0171               | 0.2038           | 10:15               | 0.0121          | 0.0421           |
| 3-8                                                                                                                                                                                                                              | 0.4268               | 0.0374             | 3-26-58                  |                      |                  | 11:10               | 0.0119          | 0.0532           |
| 3-9                                                                                                                                                                                                                              | 0                    | 0.0565             | 1:00 a                   | 0.0528               | 0.2566           | 2:00 p              | 0.0086          | 0.0923           |
| 3-10                                                                                                                                                                                                                             | 0                    | 0.0181             | 2:00                     | 0.0647               | 0.3213           | 4:00                | 0.0059          | 0.1068           |
| 3-11                                                                                                                                                                                                                             | 0                    | 0.0152             | 3:00                     | 0.0232               | 0.3445           | 6:00                | 0.0044          | 0.0170           |
| 3-12                                                                                                                                                                                                                             | 0.0790               | 0.0146             | 4:00                     | 0.0339               | 0.3784           | 8:00                | 0.0037          | 0.1250           |
| 3-13                                                                                                                                                                                                                             | 0.0647               | 0.0159             | 5:00                     | 0.0473               | 0.4257           | 12:00 p             | 0.0024          | 0.1370           |
| 3-14                                                                                                                                                                                                                             | 0                    | 0.0140             | 6:00                     | 0.0559               | 0.4816           | 3-27-58             |                 |                  |
| 3-15                                                                                                                                                                                                                             | 0                    | 0.0136             | 7:00                     | 0.0283               | 0.5099           | 3:00 a              | 0.0019          | 0.1434           |
| 3-16                                                                                                                                                                                                                             | 0                    | 0.0127             | 8:00                     | 0.0224               | 0.5323           | 7:00                | 0.0015          | 0.1501           |
| 3-17                                                                                                                                                                                                                             | 0.6339               | 0.0476             | 9:00                     | 0.0133               | 0.5456           | 12:00 m             | 0.0012          | 0.1568           |
| 3-18                                                                                                                                                                                                                             | 0                    | 0.0349             | 10:00 a                  | 0.0040               | 0.5496           |                     |                 |                  |
| 3-19                                                                                                                                                                                                                             | 0                    | 0.0155             |                          |                      |                  |                     |                 |                  |
| 3-20 to 22                                                                                                                                                                                                                       | 0                    | 0.0127             |                          |                      |                  |                     |                 |                  |
| 3-22                                                                                                                                                                                                                             | 0.0194               | 0.0133             |                          |                      |                  |                     |                 |                  |
| 3-23                                                                                                                                                                                                                             | 0.8549               | 0.0254             |                          |                      |                  |                     |                 |                  |
| 3-24                                                                                                                                                                                                                             | 0.0301               | 0.1098             |                          |                      |                  |                     |                 |                  |
| <u>Watershed conditions:</u> Based on an extrapolated estimate, 27% was under cultivation, principally in cotton, corn and hay; 34% was idle; 14% was in pasture; 22% wooded; 2% active raw gullies, and the remaining 1% urban. |                      |                    |                          |                      |                  |                     |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 75,643.<br>$\frac{1}{2}$ Thiessen Weighted                                                                                                                                 |                      |                    |                          |                      |                  |                     |                 |                  |

| Oxford, Mississippi                                                                                                                                                                                                                            |                      |                    | Watershed W-34 (62.11)    |                      |                  | Area - 75,000 acres |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------------|----------------------|------------------|---------------------|-----------------|------------------|
| Antecedent conditions                                                                                                                                                                                                                          |                      |                    | Rainfall <sup>1/</sup>    |                      |                  | Runoff              |                 |                  |
| Date                                                                                                                                                                                                                                           | Rainfall<br>(inches) | Runoff<br>(inches) | Date and<br>time          | Intensity<br>(in/hr) | Acc.<br>(inches) | Date and<br>time    | Rate<br>(in/hr) | Acc.<br>(inches) |
| <u>Event of April 14, 1959</u>                                                                                                                                                                                                                 |                      |                    |                           |                      |                  |                     |                 |                  |
| 3-15-58                                                                                                                                                                                                                                        | 0                    | 0.0137             | Rain Gages R-1 thru R-15, |                      |                  | 4-14-58             |                 |                  |
| 3-16                                                                                                                                                                                                                                           | 0                    | 0.0127             | R-25, 28 & 29             |                      |                  | 8:30 p              | 0.0006          | 0                |
| 3-17                                                                                                                                                                                                                                           | 0.6339               | 0.0476             | 4-14-58                   |                      |                  | 10:05               | 0.0008          | 0.0010           |
| 3-18                                                                                                                                                                                                                                           | 0                    | 0.0349             | 8:00 p                    | 0                    | 0                | 11:00               | 0.0026          | 0.0026           |
| 3-19                                                                                                                                                                                                                                           | 0                    | 0.0156             | 9:00                      | 0.1174               | 0.1174           | :30                 | 0.0057          | 0.0047           |
| 3-20                                                                                                                                                                                                                                           | 0                    | 0.0127             | 10:00                     | 0.3804               | 0.4978           | 4-15-58             |                 |                  |
| 3-21                                                                                                                                                                                                                                           | 0                    | 0.0127             | 11:00                     | 0.3757               | 0.8736           | 12:30 a             | 0.0109          | 0.0129           |
| 3-22                                                                                                                                                                                                                                           | 0.0194               | 0.0133             | 12:00 p                   | 0.2629               | 1.1365           | :45                 | 0.0317          | 0.0201           |
| 3-23                                                                                                                                                                                                                                           | 0.8549               | 0.0254             | 1:00 a                    | 0.1021               | 1.2386           | 1:00                | 0.0309          | 0.0279           |
| 3-24                                                                                                                                                                                                                                           | 0.0302               | 0.0198             | 2:00                      | 0.0632               | 1.3018           | 2:00                | 0.0390          | 0.0630           |
| 3-25                                                                                                                                                                                                                                           | 0.1973               | 0.0175             | 3:00                      | 0.0702               | 1.3720           | :30                 | 0.0446          | 0.0839           |
| 3-26                                                                                                                                                                                                                                           | 0.3514               | 0.1292             | 4:00                      | 0.0121               | 1.3841           | 3:00                | 0.0467          | 0.1096           |
| 3-27                                                                                                                                                                                                                                           | 0                    | 0.0317             | 5:00                      | 0                    | 1.3841           | :30                 | 0.0452          | 0.1299           |
| 3-28                                                                                                                                                                                                                                           | 0                    | 0.0197             | 6:00                      | 0                    | 1.3841           | 4:30                | 0.0378          | 0.1718           |
| 3-29                                                                                                                                                                                                                                           | 0.0606               | 0.0175             | 7:00                      | 0.0197               | 1.4038           | 6:30                | 0.0202          | 0.2278           |
| 3-30                                                                                                                                                                                                                                           | 0.1272               | 0.0275             | 8:00                      | 0.0432               | 1.4470           | 9:00                | 0.0122          | 0.2727           |
| 3-31                                                                                                                                                                                                                                           | 0                    | 0.0181             | 9:00                      | 0.0305               | 1.4775           | 10:30               | 0.0098          | 0.2888           |
| 4-1-58                                                                                                                                                                                                                                         | 0                    | 0.0152             | 10:00                     | 0.0112               | 1.4887           | 3:00 p              | 0.0060          | 0.3211           |
| 4-2                                                                                                                                                                                                                                            | 0.0340               | 0.0137             | 11:00                     | 0                    | 1.4887           | 8:00                | 0.0040          | 0.3459           |
| 4-3                                                                                                                                                                                                                                            | 1.3052               | 0.3523             | 12:00 m                   | 0                    | 1.4887           | 4-16-58             |                 |                  |
| 4-4                                                                                                                                                                                                                                            | 0                    | 0.1701             | 1:00 p                    | 0.0031               | 1.4918           | 1:00 a              | 0.0026          | 0.3622           |
| 4-5                                                                                                                                                                                                                                            | 0                    | 0.0283             |                           |                      |                  | 6:00                | 0.0019          | 0.3734           |
| 4-6                                                                                                                                                                                                                                            | 0                    | 0.0165             |                           |                      |                  | 12:00 m             | 0.0015          | 0.3855           |
| 4-7                                                                                                                                                                                                                                            | 0                    | 0.0146             |                           |                      |                  |                     |                 |                  |
| 4-8                                                                                                                                                                                                                                            | 0                    | 0.0140             |                           |                      |                  |                     |                 |                  |
| 4-9                                                                                                                                                                                                                                            | 0.0934               | 0.0140             |                           |                      |                  |                     |                 |                  |
| 4-10                                                                                                                                                                                                                                           | 0.0023               | 0.0146             |                           |                      |                  |                     |                 |                  |
| 4-11                                                                                                                                                                                                                                           | 0                    | 0.0137             |                           |                      |                  |                     |                 |                  |
| 4-12                                                                                                                                                                                                                                           | 0                    | 0.0133             |                           |                      |                  |                     |                 |                  |
| 4-13                                                                                                                                                                                                                                           | 0                    | 0.0127             |                           |                      |                  |                     |                 |                  |
| Watershed conditions: Based<br>on an extrapolated estimate,<br>27% was under cultivation,<br>principally in cotton, corn<br>and hay; 34% was idle; 14% was<br>in pasture; 22% wooded; 2%<br>active raw gullies, and the<br>remaining 1% urban. |                      |                    |                           |                      |                  |                     |                 |                  |
| Notes: To convert runoff in in/hr to cfs, multiply by 75,643.<br><sup>1/</sup> Thiessen Weighted                                                                                                                                               |                      |                    |                           |                      |                  |                     |                 |                  |



OXFORD, MISSISSIPPI WATERSHED W-34





OXFORD, MISSISSIPPI  
WATERSHED W-34  
AREA: 75,000 ACRES













